

COUNTWAY LIBRARY



HC 311X F

BOSTON
MEDICAL LIBRARY
8 THE FENWAY

THE JOURNAL-~LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

A SEMIMONTHLY MEDICAL JOURNAL

W. A. JONES, M. D., EDITOR

VOLUME XXXVIII

MINNEAPOLIS
W. L. KLEIN, PUBLISHER
1918



Digitized by the Internet Archive
in 2016

<https://archive.org/details/journallancet3819nort>



THE JOURNAL-~~THE~~ LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, JANUARY 1, 1918

1913
No 1

GRADUATE WORK IN MEDICINE IN THE UNIVERSITY OF MINNESOTA*

By L. B. WILSON, M. D.

ROCHESTER, MINNESOTA

INTRODUCTION

Graduate and research work in pathology, clinical medicine, and surgery has been carried on at Rochester in the Mayo Clinic for several years. In 1912 definite three-year courses in these subjects for graduates in medicine were instituted. In 1914 the University of Minnesota, through its Medical School, began graduate work in the various fields of medicine and surgery in addition to that which had already been offered for some time in the laboratory branches. In June, 1915, the University and The Mayo Foundation entered into an agreement by the terms of which the funds of the Foundation were devoted, under direction of the Board of Regents of the University, to graduate and research work in medicine. The first arrangement was for a temporary period. On September 13, 1917, the agreement was made permanent. By the terms of this agreement, the University of Minnesota has entire control of the funds of the Mayo Foundation and of the graduate medical education and research of the Foundation. Until such time as the funds of The Mayo Foundation shall have reached the sum of two million dollars by the addition of accrued interest, all the current expenses of the Foundation are being

borne by the Mayo Clinic. On September 13, 1917, The Mayo Foundation fund amounted to \$1,650,344.79. For the fiscal year ending July 31, 1917, the expenditures of the Foundation were \$140,365.25, exclusive of "overhead," that is, rent, heat, light, etc.

The affairs of all the graduate work in medicine in the University are controlled by a committee of eleven men, consisting of the President of the University, the Dean of the Graduate School, the Dean of the Medical School, and the Director of The Mayo Foundation, *ex officio*, and of four appointive members from the Medical School and three appointive members from The Mayo Foundation.

GENERAL PLAN

1. *Object.*—The graduate work in medicine on The Mayo Foundation and most of that in the University at Minneapolis is not intended for those seeking brief practitioners' or review courses. Opportunities for work of this kind are to be found in the summer session of the Medical School and in the courtesies extended to visiting physicians and surgeons in the Mayo Clinic. The object of the University of Minnesota is to place graduate work in medicine on a university basis. By this is meant the placing of advanced graduate medical education on a

*Presented for publication Nov. 6, 1917.

basis comparable with that of graduate education in the arts and sciences in other departments of universities of high standing. The formal rules and regulations for the guidance of the work have had their origin in the rules and regulations which govern graduate training in subjects other than medicine. Material modifications of these rules and regulations will probably be made,—for example, the language requirement for students in clinical branches has been the subject of much discussion. Again, it may become recognized that recent graduates of Class A medical schools already have a scientific training approaching that held by the possessors of the Ph.D. degree,¹ and some modification of the graduate degree granted them may be accordingly made.

2. *Entrance Requirements.*—Entrance upon the work for the degree of Ph.D. in medicine in the University of Minnesota is limited to those who have (a) the Bachelor's degree or its equivalent; (b) the degree of Doctor of Medicine from acceptable institutions (that is, those in Class A of the American Medical Association); and (c) one year's experience as interne in an approved hospital, or as an assistant in a laboratory in an acceptable medical school. In the fundamental laboratory sciences (anatomy, physiology, bacteriology, pathology, and pharmacology), properly prepared students may be admitted without the possession of the degree of Doctor of Medicine, and, of course, without the internship, as candidates for the Master's degree (M.A. or M.S.) or the unmodified Doctor's degree (Ph.D.).

3. *Course Requirements.*—For the Doctor's degree (Ph.D.) at least three full years of successful graduate study are required; for the Master's degree in the laboratory sciences a minimum of one year of residence is required. Each student registers for a major and a minor subject, the minor supporting the major. Each student takes both written and oral examinations in his minor and in his major subject, and before graduation presents a thesis in his major subject, which he must further defend in an oral examination before the entire staff of the department in which he is taking his major. This examination also includes questions in any portion of the field of the major.

4. *Degrees.*—On the satisfactory fulfillment of the requirements the candidate is recom-

mended to the Board of Regents as a proper recipient of a graduate degree. In June, 1917, the University granted the following graduate degrees in medical branches:

Taylor, Rood, Doctor of Science in Pediatrics.

Woltmann, H. W., Doctor of Science in Neurology.

McWhorter, G. L., Doctor of Philosophy in Surgery.

Morris, R. E., Doctor of Science (in Medicine).

Stewart, C. A., Doctor of Philosophy (in Anatomy).

Crispin, E. L., Master of Science (in Medicine).

McMahon, F. B., Master of Science (in Surgery).

Drips, Della G., Master of Science (in Pathology).

Pettibone, Dorothy, Master of Science (in Bacteriology).

Gault, C. C., Master of Arts (in Physiology).

Kittelson, J. A., Master of Arts (in Anatomy).

McKinley, J. C., Master of Arts (in Anatomy).

FACILITIES

1. *Living Stipends.*—The stipends to be paid Fellows in the Graduate Medical School of the University this year aggregate about \$50,000, \$10,000 of which is for Fellowships in the Medical School at Minneapolis and \$40,000 for Fellowships at Rochester. At Minneapolis these Fellowships pay \$500, \$750, and \$1,000 per year for the first, second, and third years, respectively. At Rochester the first year's stipend is \$600, and the second and third years' the same as at Minneapolis.

While these stipends are small they enable the graduate student to pursue his work with less worry than would fall to his lot were he earning his way. The regular course of training in medicine is longer than that given in any other profession. To add to this training, three years more of special preparation without providing some means of living would work an injustice to students in moderate circumstances. Fellowships, therefore, are a necessity for the great majority of students continuing their study after their regular interne service.

2. *Libraries.*—The general medical libraries on the Campus in Minneapolis and in Rochester contain complete files of most of the important medical periodicals. The work in these libraries is under the direction of a corps of well-trained and enthusiastic librarians and bibliographers. A good library, well stocked with complete files

1. Wilson, L. B.: The Status of the Graduate Degree in Medicine. *Science*, 1917, xlv, 127-131.

of the leading medical periodicals, is an absolute necessity in graduate work in scientific medicine. While meager libraries may be eked out by the generous assistance of the Surgeon General's library, the student of scientific medicine must have the opportunity to make himself thoroughly at home in a well-stocked and well-arranged library. Not less important than the books, however, are trained assistants. Many young medical graduates need help in learning to use their time intelligently and efficiently in the modern library. Of course the librarian and bibliographer should assist the graduate student rather than do his work for him.

3. *Laboratories.*—Well-equipped laboratories in the fundamental medical sciences (anatomy, chemistry, physiology, pathology, etc.) and as adjuncts to the clinical branches, are amply provided both in Minneapolis and in Rochester. Extensive and carefully catalogued research museums and well-equipped departments for experimental work are also at hand in both places. The graduate student must have the best of modern laboratory facilities for pursuing his investigations, not only in the basic medical sciences, but also concerning tissues, body fluids, and physiologic and pathologic processes in direct relationship to the individual patient.

4. *Hospitals.*—Over 1,000 hospital beds furnish the clinical material for the graduate students of the University of Minnesota. Two hundred of these are in Minneapolis and 800 in Rochester. The graduate student must have the facilities at hand for studying his patients under orderly hospital care.

5. *Ambulatory Patients.*—At the University in Minneapolis and at the Mayo Clinic in Rochester, between 55,000 and 60,000 ambulatory patients are examined annually. The graduate student must have opportunity to examine for diagnosis a large number of patients. By preference these should be referred cases since this group contains a high percentage of patients with diseases difficult of diagnosis.

6. *Incentive to Investigation.*—In the Medical School at Minneapolis and in The Mayo Foundation and Clinic at Rochester, a number of high-grade men, members of the faculty or permanent staff, are devoting the whole or a large share of their time to the advancement of medical science in the fundamental and practical fields. This, I believe, constitutes the most important agency in the development of the Graduate School since it supplies the inspiration, encouraging graduate

students to do scientific medical work. If the members of the staff of a graduate school are doing only mediocre routine work, the graduate student is apt to do only mediocre work. If they are doing routine work of a high order, the student will do routine work of a high order. If, in addition to high-grade routine work, they are doing high-grade investigative work, fundamental or clinical, the graduate student is almost certain to shape his ideals and his work in accordance with their inspiring example.

PERSONNEL OF THE STUDENT BODY

1. *Source and Number.*—During the past year, graduate students in medicine have been received from the following medical schools: Atlanta College of Physicians and Surgeons, Calcutta, Colorado, Columbia, Edinburgh, George Washington University, Harvard, Jefferson, Johns Hopkins, Ludwig-Maxe University (Munich), Marion Sims, Marquette, Maryland, Michigan, Minnesota, Nashville University, Nebraska, Northwestern, Pennsylvania, Rush, St. Louis, Toronto, Tulane, Vanderbilt, Virginia Medical College and Virginia University.

Total enrollment in medical departments—118.

Enrollment in clinical departments (by majors):

	At Rochester	At Mpls.	Total
Surgery	58	3	61
Ophthalmology and Otolaryngology	3	4	7
Medicine	11	2	13
Nervous and Mental.....	0	2	2
Pediatrics	1	4	5
Obstetrics and Gynecology.	0	2	2
—	—	—	—
Total	73	17	90
In Fundamental Departments:			
Anatomy	0	9	9
Pathology	4	0	4
Bacteriology	6	6	12
Physiology and Physiologic Chemistry	0	3	3
—	—	—	—
Total	10	18	28
—	—	—	—
Grand Total	83	35	118

2. *Weak Points in Preparation.*—As these young men come to us, we find most of them well prepared to be general practitioners. This preparation has been the highest aim of most medical schools, and is that required by state examining-boards. The graduates, as a rule,

are well grounded in the fundamental medical sciences, and have had good elementary training in all of the clinical subjects. The most frequent scholastic defects are lack of general information, poor training in the use of the English language, little efficiency in the use of a library, no great ability in attacking intensively problems of research, lack of well-organized procedure in history-taking, and little conception of means of correlating their clinical observations with those of others.

3. *Object in Doing Graduate Work.*—Their objects at entrance are indicated by the facts that of the 118 graduate students, 28 are taking work in some of the fundamental departments for their majors, while 90 are taking work in the clinical departments for their majors. In the fundamental departments, there are 9 in anatomy, 3 in physiology, 4 in pathology, and 12 in bacteriology. In the clinical departments, 61 are in surgery, 13 in medicine, 7 in ophthalmology and otolaryngology, 5 in pediatrics, 2 in nervous and mental diseases, and 2 in obstetrics and gynecology. These enrollments indicate the primary incentives of the students in taking graduate work. Some of the students are only preparing themselves to earn a better living. A fair percentage of them add to this motive the desire to acquire special knowledge in their chosen fields for the sake of the patient. A few are actuated mainly by the latter motive. It is noteworthy that many who begin graduate work with no other apparent desire than that of increasing their earning capacity by becoming good mechanics in some branch of medicine, are later inspired to take up some fundamental or clinical problem and pursue it with real zest. Not infrequently men ask to be left a longer period on some service which gives them a better opportunity for investigative work or to be directly transferred to such a service. Problems in surgery and in clinical medicine, especially in the fields of metabolism, cardiovascular disease, etc., have engaged the attention of a number of our best young men. The department of physiologic chemistry, bacteriology, pathology, and anatomy also contain a small number of enthusiastic students. While several men have changed their majors from surgery to medicine, only one so far has changed his major from medicine to surgery; and that was done on the advice of his instructors when the student revealed a phenomenal knowledge of anatomy and an aptitude for minute dissections.

UNIVERSITY IDEALS

In a democratic university owned by the people and managed to serve the people, all forms of physical and mental training may be proper. Even the purely trade school now has its recognized place in university training. So, in medical training, technicians, general practitioners, and specialists in the various practical and fundamental branches may all properly be trained by the university. The girl who wishes to remain a mere technician, a preparer of microscopic sections, for example, may be given an equal opportunity with the man who wishes to spend his life in surgery. The country practitioner who wishes to brush up for three weeks on any medical subject or subjects may, quite as properly, be given an equal opportunity with the man who wishes to spend three years in investigating beriberi. On broad grounds, there can be no objection to any or all of these subjects receiving their due share of attention. But, while admitting all this to be true, we must not lose sight of the fact that the university has also an important duty to perform in determining an individual's fitness for beginning a certain piece of work and in setting standards by which the work shall be measured if it is to receive any stamp of approval from the university. In other words, the university, besides furnishing opportunity for study, must standardize its output. And it is equally true that in graduate work in medicine the unprepared student who takes a short course in a purely technical subject, the graduate student who takes however long a course which develops his efficiency only, and the graduate student with a well-trained mind who spends years in advancing the science, as well as the art, of a specialty, should not be measured by the same standard nor stamped with the same label at graduation.

For years more or less well organized formal instruction to graduates in medicine has been given by many schools in the United States, as well as abroad. The difference between such work and that which the University of Minnesota is now doing is that too frequently the former was a "stuffing" process for financial gain, while the latter is an attempt to furnish gratis the organized facilities by which the student may work out his own salvation. These graduate students of medicine are making a prolonged and serious effort to increase their efficiency and to add to scientific knowledge in certain fairly limited fields. The University of Minnesota provides the facilities and measures their achievements.

In starting on this work, the University of Minnesota felt that its safest course was to proceed from the customs which had hitherto obtained in graduate work in non-medical subjects in universities generally. It realizes, however, that the rules which govern the standardization of graduate work in literary subjects do not cover satisfactorily the variety of opportunities asked for by many earnest and honest graduate students in medicine. The problem of the readjustment of these rules is one which no university can settle for itself. There must be uniformity of standards among the universities providing graduate training and granting gradu-

ate degrees in medicine in the United States. Such uniformity was contemplated by the Association of American Universities, at its meeting last winter, when it requested the Educational Council of the American Medical Association to appoint a committee, of which a majority of the members were present, to confer with them concerning graduate degrees in medicine. However, until the universities do take uniform action, there seems to be no safety in any course other than that of granting certificates of attendance only, except for such work as adheres to the rules already obtaining in the granting of the Master's and Doctor's degrees in non-medical sciences.

SKIN-FLAP IMPLANTATION AS A RADICAL MEASURE TO CURE OLD SUPPURATIVE LUNG-ABSCESSSES AND EMPYEMA ABSCESSSES*

EMIL G. BECK, M. D., F. A. C. S.

CHICAGO, ILLINOIS

The presentation of this subject at this time does not demonstrate a perfect method of obliterating lung-abscess cavities and old empyemata, but, rather, illustrates the gradual improvement in the technic, which may eventually lead to an efficient and practical method of curing a condition of the lung which heretofore has been one of the most difficult tasks for the surgeon. Surgeons who have had experience with this class of cases know only too well the difficulties which one encounters when he tries to obliterate an empyema or lung-abscess which has not closed spontaneously after a reasonable length of time.

I shall not discuss here the various methods and the surgical technic which are employed in draining acute lung-abscesses or empyemata, but will simply speak of the treatment of the cases which already have been operated on in the acute stages and have failed to close.

We ask ourselves the question why it is that most of the cases heal spontaneously after the abscess or empyema has been drained, and others keep on draining despite every effort on our part to close them. A lung-abscess is more likely to persist than an empyema, because the abscess wall is more rigid after it has persisted for a long period. In empyema it will depend entirely upon

the resiliency of the contracted lung. If the empyema has persisted for many years, the lung will be contracted to a small mass of connective tissue in the upper posterior part of the thorax, and will leave a large space between the rigid chest-wall and the remnant of the lung tissue.

These cavities are difficult to disinfect, because a good many of them communicate with one or more bronchi, and in others the pleura contains living micro-organisms, even if the secretions appear sterile.

Chronic suppuration will also be greatly influenced by the operative treatment which has been done in the first place, the drainage-tube at times being placed entirely too high for efficient drainage, and thus there is a constant accumulation of pus. At times, foreign bodies will be found, such as rubber drainage tubes, which have slipped in, and in lung abscesses we find concretions of lime salts, which keep up the suppuration.

Cases that hold a quart or two will rarely obliterate spontaneously. Nature tries its utmost to contract such cavities; the ribs have retracted until they are close together, forming practically a solid bony chest-wall with the intercostal spaces entirely shut, in fact, in many cases they overlap; the diaphragm has pulled up two or three inches higher on the affected side, so that sometimes the dome reaches to the third or fourth rib; even the spine will curve to the affected side, to diminish the size of the cavity. These

*This paper is a preliminary report made by Dr. Beck before the Western Surgical Association last year. It is to be followed by a fuller report, which will soon be published. Dr. Beck kindly tendered the report to The Journal-Lancet for publication.—The Editor

efforts of nature to eliminate the cavity are further aided by granulations of the pleura, which grow profusely to fill the rest of the empty space. After all this, we find cases which after years hold as much as 1,000 c.c. of fluid.

Surgeons have taxed their ingenuity to cope with this extremely difficult situation. They have devised operations for the obliteration of these suppurating cavities. Those best known are the Estlander and Schede operations, the decortication of the lung, and the extrapleural resection of the ribs for the collapse of the soft parts.



Fig. 1. Cauterization of the bronchial fistula after exposure of lung abscess.

In 1908 I described a method of obliterating empyemata and lung-abscesses by means of injecting a mixture of bismuth subnitrate and vaseline, in proportion of one-third of the former to two-thirds of the latter, commonly known as bismuth paste, which has been found quite efficient in obliterating the majority of these protracted suppurating sinuses in empyemata. The literature contains so many favorable reports on this treatment that I do not need to mention my own experience in this class of cases, except by stating that in cavities holding not more than six ounces of fluid, the treatment by bismuth injections will be found extremely valuable, and that nearly every case with a small cavity can be obliterated by this treatment. There will remain, however, a residue of cases where the cavity is too large, and, although it may become sterile, the rigid chest-wall is unable to meet the

firmly retracted lung, and thus the free space will remain. For this class of cases I have devised a method of closure which is based on the principle employed in cavities of bone-lesions, such as osteomyelitis,—namely, implanting skin into the depth of the cavity, in order to stop the suppuration. In other words, the interior of the cavity is transformed into skin-covered surface, and I shall show some of the earliest cases in which I have performed this operation, and although, in the first few, it has not proved entirely perfect, there is a prospect of perfecting the



Fig. 2. Implantation of skin-flap; gauze packed against flap.

technic to such degree as to make this procedure supplant all the extensive resections of the chest.

I shall now show several cases to illustrate the method and the points of technic will suggest themselves during the demonstration. I shall also show on the screen some of the features connected with the work.

I cite here in detail only one case and illustrate the same with pictures. I shall reserve for a later period the publication of the other seven cases of which I have records, when the permanency of the cure is established and when more material has been added to it.

CAUTERIZATION OF BRONCHUS AND IMPLANTATION OF SKIN-FLAP AS A MEANS OF TREATMENT OF BRONCHIAL FISTULA

A girl, aged 19, developed a lung-abscess at the age of five, which was drained in the axillary line, in the region of the fifth rib. Constant discharge for fourteen years with expectoration of pus, was the deciding

factor for this extensive operation. A flap including skin, fascia, and muscle, eight inches in length, with the base toward the axilla and the apex pointing downwards, was raised, and the ribs exposed. Two sections of the fourth and fifth ribs were removed. This laid open a small abscess cavity, so narrow as to be considered a portion of the bronchial fistula. The walls of the abscess cavity were smooth and glistening, and in this respect different from the mucus-lined bronchial opening.

DESTROYING THE MUCOUS MEMBRANE BY CAUTERY

The abscess cavity was explored with the finger, no foreign body was found, but on inspection the opening into a large bronchus was visible. The actual cautery was employed in this case to destroy the mucous membrane in the large bronchus, and thus insure complete



Fig. 3. Complete closure and skin-evolution. After sixteen years of suppuration.

obliteration of the opening. In order to prevent a fire, the ether anesthesia was discontinued, and for about three minutes the patient was given oxygen by inhalation, to get rid of all the ether in the bronchi. The mucous membrane was destroyed, the Percy cautery being employed. This step is illustrated here.

In some instances the abscess cavity consists of compartments which are divided by distinct septa, and in each of these compartments is a small bronchial opening. In one of my cases seven such bronchial openings opened in the abscess cavity.

GAUZE TIGHTLY PACKED AGAINST INSERTED FLAP

The apex of the skin-flap was now grasped with artery forceps, and drawn directly into the cauterized bronchial opening, to plug it and to produce union of the raw surface of the skin-flap with the wound surface. No sutures were applied to the skin, neither to the external wound, nor to the flap, but gauze was tightly packed against the inserted flap to produce rapid adhesion.

Should it be difficult to retain the skin-flap by a mere packing of gauze against it, it may be feasible to anchor the end of the flap into the deepest part of the cavity.

Care, however, must be taken not to puncture any blood-vessels.

Firm adhesions of the skin-flap usually take place in four or five days.

THE RESULT OF THE TREATMENT

The further treatment in the case consisted in the adhesive plaster method of epidermization of the raw surfaces and daily dressings until the entire cavity had been covered with epithelial growth.

The discharge and cough stopped a few days following the operation and the patient gained weight. The final result is in the accompanying illustration.

Bronchial fistulae are not always single, although they may empty into one cavity, and communicate with the outside by a single sinus of the chest-wall. I demonstrated by one case presented, in 1915, before the Western Surgical Association, an abscess cavity which contained seven separate bronchial openings. These were cauterized with a nasal cautery under light reflected from a head-mirror. The procedure was entirely painless, and caused no other discomfort than the irritation produced by the smoke of burning flesh drawn into the trachea and nostril during inspiration.

The method has these five objects in view:

1. To expose the diseased area by an adequate flap-incision.
2. To take away every vestige of the diseased tissues under the guidance of the eye.
3. To close the wound in such a way as not to permit any dead space in the resected cavity, implant the skin-flap.
4. To use no suture material whatever, except ligatures for arteries, and leave the wounds widely gaping.
5. To reproduce epithelium of granulating surfaces with skin-grafts.

DISCUSSION

DR. BYRON B. DAVIS (Omaha): I have always felt that most of the exceedingly bad cases, which last year after year and have many operations done without success, are due to more or less dilatory tactics at the beginning. This, of course, is not always the case, but very frequently so.

In these chronic cases of osteomyelitis, where we have long-continued trouble, sinuses running year after year, it is exceedingly important to know how much bone is diseased, and, fortunately, the *x*-ray helps us out. If we find that the disease is rather sharply localized, if we do not have a very large sequestrum there, I have always been very much in favor of a minor operation, and, preferably, the use of bismuth paste in these cases; but Dr. Beck has touched upon a class of cases that cannot be relieved by any of these ordinary measures. If we have extensive trouble in one of the serious cases, with probably a lot of eburnation of bone, we have a large operation to do; and one thing I want to know positively before beginning is something about the resisting power of the patient. I have seen one or two patients die from these operations where an amyloid condition of the viscera already existed, and it was only to be expected that a fatal result would follow. I want to warn you to look after the general condition of the

patient very carefully before you begin, and when you begin, I believe, like Dr. Beck, you should be absolutely radical—make such a large incision that you can inspect every part and remove all disease with one fell swoop.

The particular point of Dr. Beck's paper in leaving open wounds, it seems to me, is just the thing; and when he emphasizes using absolutely no sutures, I believe he has emphasized a point that is very important. I know the tendency is for all of us not to leave too much of a wound. We think that a suture or two will improve the condition, and then we will probably pass another suture about the other end. We narrow the thing down, and we do not get the good drainage we ought to have. In addition to all the other advantages of Dr. Beck's operation of leaving the skin wound wide open, we leave opportunity for epidermization, and we get a covering there which we would not otherwise get, and could not get, unless we leave the wound open as he does.

I wish, in conclusion, to compliment Dr. Beck on the splendid results he has obtained in these three very bad cases.

DR. J. D. GRIFFITH (Kansas City): I want to thank Dr. Beck for the introduction of that epithelium into the bottom of the place that he has cleaned out. This helps to solve the mystery of those old cases in which healing would not take place. In the case of the man where a bronchial tube was opened, the old treatment of going in and doing extensive rib resection and getting down there with the Schede operation, would have given him very marked scoliosis, but he has very little scoliosis. He will go through life almost straight. If you examine him closely you will find there is resistance in his spine, but it is so slight that it cannot be observed.

I wish to congratulate Dr. Beck on his excellent paper and on the results he has achieved in these cases.

DR. H. E. PEARSE (Kansas City): I think the more we study the bacterial infections in bone, the more apt we are to get away from the theory that the bone manifestation is primary. In other words, hematogenous infection does not take place until the tissues of the body are widely infected; and the only reason osteomyelitis requires special treatment is because of the terminal results in the bone and because of the inability of the bone to take care of itself.

Recently, there came to me a boy with a swollen right limb, and a fluctuating knee-joint, with a temperature of 106,° with delirium, and with a history of a long course of boils upon his body. There was one slight abscess on the opposite shoulder at the time. The internes on the service were rather doubtful about the pathological conditions. One of them insisted that the patient was suffering from an acute osteomyelitis; another one said he had secondary arthritis of the knee-joint secondary to the long boil formation; and a third insisted that on account of the boy having a red spot upon the external portion of the knee-joint we had erysipelas to deal with, and in consequence of that idea they took a culture from the boil on the shoulder. Immediately following that we prepared to open the bone, because I was satisfied of the presence of an acute suppurative osteomyelitis of the shaft of the femur. After the primary incision was made through the skin, the edematous tissue lying beneath the skin was immediately cultured into several tubes. After cutting

through the soft parts, I struck the chisel through the bone and found no pus, but with the end of the bone-scoop I went deeply into the medullary cavity of the bone, and carefully cultured the substance taken from the center of the bone. I gave up my diagnosis of suppurative osteomyelitis, and one interne gave up his of erysipelas, and agreed we had secondary knee-joint infection. I opened the knee-joint, removed several ounces of turbid fluid, which was not pus, and this was placed in culture tubes. All of the cultures showed a virulent streptococcus except the one cultured from the boil upon his shoulder, which grew to be a rather innocent staphylococcus albus. We covered the wounds, let them alone without drainage or further interference, and the man made a good recovery, with perfect restoration of function of the limb. We must recognize that hematogenous infection is general, and that the infection in the bone is only on account of the limited ability of the bone to take care of itself.

I wish to congratulate Dr. Beck upon his fastening skin into these deep wounds. I tried to do this a few years ago by turning the edges of the skin, and holding them down with iron nails, and we did not get anywhere. The reason of Dr. Beck's success is the very large and long skin flap which he uses and allowing the flap to press to the deepest portion of the wound without tension. I am very glad to have seen the technic of the doctor.

DR. F. T. MURPHY (St. Louis): In Dr. Beck's paper I think we have all been impressed by the results he has obtained, and, personally, it seems to me, the use of skin flaps and the removal of dead bone, is to be enthusiastically advocated. In my own mind I was a little confused as to how much emphasis Dr. Beck would place upon the use of bismuth-paste injections. I think the statement was made in the first part of his paper that some 40 or 60 per cent of the total cases were cured by the injection of bismuth paste. In my own experience that has not been the case. If I understood Dr. Beck correctly, I would congratulate him very heartily upon the results; but I would have to confess that personally I have not been able to get them, and it seems to me that the injection of this paste into sinuses is a different thing from filling an open cavity with Beck's paste or with the Moorhof bone-wax, especially putting it into a tortuous sinus. To put it into the latter is to introduce there a dangerous principle in the surgery of bone.

DR. J. N. JACKSON (Kansas City): I desire to emphasize one small factor in the technic of Dr. Beck's work which is not only applicable to the condition which he describes in bones, but can be widely utilized elsewhere. I refer to the use of adhesive plaster to stimulate epithelialization. In 1895, before the Mississippi Valley Medical Association, in Detroit, I listened to a very interesting paper by Dr. Carter Cole, of New York, on the cure of chronic ulcers. In this paper he outlined his method which, practically speaking, was the use of adhesive plaster to cover and protect the epithelial cells of the granulating surface. I have used that method extensively ever since he first described it, first, beginning with the ordinary chronic ulcers of the various types about the lower extremities. Having obtained remarkable results in this type of cases, I have extended the application of the method to practically all forms of granulating wounds. For instance, when you

have wounds of the abdominal wall which have suppurated or have become necrotic, you know how hard they are to heal. If you cover them with ordinary zinc oxide adhesive plaster, the rapidity with which new skin is formed is remarkable.

I think the beauty of the results shown by Dr. Beck, and the wonderful absence of great scarring, are due to the use of the adhesive plaster; and you will find a wide service for it, therefore, in any form of granulating wound. With old burns which, after necrotic suppuration, have reached the stage of granulation you know how slow things are in getting well. You cannot find anything which will promote so rapid a closure of a granulating wound as adhesive plaster covering the granulating surface.

DR. J. F. PERCY (Galesburg, Ill.): I would like to ask Dr. Beck some questions. First, as to the technic he uses with the plaster. When does he begin the use of the adhesive plaster? Second, how often does he change it? Third, how long does he continue its use? Fourth, how does he dress these cases? Fifth, is there any special form of dressing he uses? Sixth, has he ever found it necessary to resort to skin-grafting for these extensive wounds?

DR. DEAN LEWIS (Chicago): I think opinions are always going to differ in the treatment of osteomyelitis. There has not been much, if anything, said with reference to bone-plugs. I believe Ashton was the first to introduce skin flaps in the treatment of osteomyelitic cavities; and the purpose for which the pedunculated skin graft was introduced was to close cavities in the tibia, particularly in the upper end, where a large amount of skin was removed at the primary operation. I believe, if the proper work is done with bone-plug at the first operation, there will be less necessity, at all times, for the use of this pedunculated skin graft.

In the last few years I have treated osteomyelitic cavities with sequestrum in a number of different ways, but I think, by all odds, the most satisfactory way is that introduced by Burgess, in which the sequestrum with the hard indurated involucrum was taken out in toto, not healthy bone, and that can be closed with Moorhof bone-plug. I have done a number of operations in which I have treated these cases very much after the manner that a dentist prepares a cavity in a tooth. I have taken out the sequestrum with the hard involucrum, I have carbolized that, and neutralized the carbolic acid with alcohol, leaving in a little alcohol, and have applied the cautery for the purpose of coagulating blood to have a dry cavity, then fill it with the Moorhof bone-plug, suture the skin over, and close it as you would an abdominal wound, or any clean wound. What happens is this: Within a few days the Moorhof bone-plug begins to be extruded. You take this off (it requires no packing or dressing), and it has been my experience in the majority of cases these bone cavities will heal with the Moorhof bone-plug where the primary operation is radical enough to remove the seat of infection. There has been less and less use for the pedunculated skin graft since it was first introduced to close cavities in the upper end of the tibia, but the bone-plug was not resorted to at this time.

DR. A. T. MANN (Minneapolis): We have been using the Moorhof bone-plug or bone-wax in Minneapolis for twelve years. I saw Moorhof using it in 1904, and he certainly got remarkable results in the

cases in which he could practically close the cavity in the chronic and subacute cases. The disinfection can usually be made complete enough to get healing by first intention in the skin and overlying tissues, leaving the wax in as a plug to be gradually taken out. The serial x-ray pictures show that perfectly. The formula is 20, 40 and 40—that is, 20 parts of iodoform, 40 parts of spermaceti, and 40 of rapeseed oil. The x-ray shows in the first picture as though the bone-wax were made of lead, very clear and sharp. The pictures taken two or three weeks later show that they are beginning to look a little irregular at the margins. In pictures taken ten days later they begin to melt away at the margins, and so on up to about three months, when the wax will be gone, and you will have a callus of bone and connective tissue, mostly bone, in its place.

We have gone a step further than that in the acute cases because some of the infections are so violent that we would not think of closing the wounds. We use carbolic acid, followed by alcohol, sterilizing the cavity after it is scooped out. We use wax in such cases. We fill the cavity. The wax is prepared so that it will be fluid at 110°, not hot enough to burn the tissues. It is made that warm over a water bath, and is mixed and poured in. It is a solid wax when it cools to the temperature of the body, and that makes the plug. It can be left in a wide-open place. We put a piece of rubber over the wax, and the wax will stay there for weeks; and all you have to do is to change the outside dressing. The moderate discharges will ooze out about the bone-plug and under the rubber which is over it. This gets rid of the great pain caused by the pulling out of the gauze packings we formerly used, and by the repacking of the cavities with gauze. It makes the dressings easy and rapid, and the healing is fully as rapid as by the old method, if not more so.

DR. J. F. BINNIE (Kansas City): I am very glad Dr. Lewis and Dr. Mann spoke as they have done. In recent years I have come more and more to close, or partially close, osteomyelitic cavities after an operation. I clean out the cavity as thoroughly as possible, take out the sequestrum, clean again as thoroughly as possible, and use the various antiseptics or sterilizers, such as carbolic acid neutralized with alcohol. One should not bother his head about thoroughly drying the cavity. Pack the hole completely with crystals of boracic acid, mixed with a little iodoform, close the wound or leave it open, and apply dressings. I have found this method very effective in a large number of cases; only the outside dressings require changing.

DR. BECK (closing): We have used this adhesive-plaster method for two years on granulating surfaces, and have given up skin grafting for good. I have used it in amputation of the breast, where I did not have enough skin, and in two or three weeks the entire defect was covered.

About the dressing: Pus forms after twenty-four hours, when the plaster is taken off, and without rubbing the granulations a new piece of adhesive plaster is put on. We do not use zinc-oxide plaster. The adhesive plaster strips cover a part of the edge of the skin, and the edge of the granulating surface, with the center left open. As we take off the adhesive plaster the next day, we find a bluish margin one-quarter of an inch wide, which is newly formed epithelium.

In regard to the mortality: One should hesitate to operate on weak people. I have found that patients with osteomyelitis of this type stand a lot of trauma and long operations without bad results. I have had no mortality in a series of forty-two cases. But the neglected cases of hip-joint disease do not stand opera-

tions so well. One of the patients I have here exhibited, who had an operation lasting two and a half hours, wanted to get out of bed on the third day; and the man with the rib-resection walked around on the third day. These patients gain in weight rapidly after operations.

THE PRODUCTION OF HYDROCHLORIC ACID IN THE STOMACH*

By H. E. FRENCH, M. D.

Professor of Anatomy and Dean of the School of Medicine, University of North Dakota

Since the days of Prout and Beaumont, nearly one hundred years ago, there has probably been more discussion concerning the acidity of the gastric juice than concerning any other single problem of physiological chemistry. It is now generally accepted that the essential acid is hydrochloric; that it is useful in digestion; that it arises from a process of secretion on the part of the gastric mucosa; that it is not stored as such in any part of the mucosa; and that the chlorine ions come from the food ingested, not immediately, but after digestion and absorption of the food, and its return to the mucosa as blood or lymph. Much information has been gathered as to the amount or percentage of the acid, and the rules that seem to govern its production in health and disease. It also seems to be proven that there is more chlorine in the parietal cells than in the chief cells, or in any other part, of the stomach or of the body.

Heidenhain, in 1870, who first described the parietal cells, suggested that the acid is produced by these cells. He was led to this conclusion by experiments similar to the Pawlow stomach, by which he found that acid was produced in a pouch that involved a part of the stomach containing parietal cells, and not in a similar pouch from the pyloric end. Although it has been recognized that the proof was far from complete, it has been generally supposed that these cells are related to the production of the acid. Before the time of Heidenhain, however, Claude Bernard, in 1850, applied microchemistry to the problem in the form of the Prussian-blue reaction. Since the presence of an acid is necessary to the production of the blue from the interaction of solutions of potassium ferrocyanide and a ferric salt, he reasoned that, if solutions of the lactate of iron and

potassium ferrocyanide were injected into the blood-stream, blue would result only where the solutions come together in the presence of an acid, and that, if acid were formed or were present in any particular gland or cell, the presence of the blue reaction would reveal it. He, therefore, injected tepid solutions of these salts into the jugular vein of a semifasting rabbit, killed the animal three-quarters of an hour later, and looked for the reaction. Blue was found only on the surface of the mucous membrane of the stomach; microscopic examination did not reveal it in the gastric glands. Subsequent experimentation gave the same results, and he concluded that the acid was formed externally to the glands. Though he thought at that time that the acid arose from fermentation, he later (1877) concluded that "the acid of the gastric juice is formed only after secretion of the juice, the glands secreting a liquid which breaks up into an acid fluid and another product as yet not definitely determined." In many ways, we know nothing more about the problem today.

Since the time of Bernard, many have given more or less attention to the question. Some have made use of the Prussian-blue reaction, either by injection or by immersing the fresh mucosa in the solutions. Others have used indicators, such as phenolphthalein, Congo red, etc.; but no one has been able definitely to locate the place of secretion of the acid.

The most recent work upon the subject has been by Miss FitzGerald,¹ in the laboratory of Professor A. B. Macallum, of the University of Toronto, and Harvey and Bensley,² of the University of Chicago. Miss FitzGerald made use of the Prussian-blue reaction, using potassium ferrocyanide and the double citrate of iron and ammonia. By a series, carefully worked out, and reported experiments, consisting of injections of the solutions, either intravenously or subcutane-

*Read at the thirtieth annual meeting of the North Dakota State Medical Association at New Rockford, May 29 and 30, 1917.

ously, into twelve animals (seven rabbits, three guinea-pigs, and two dogs), and post-mortem examinations of the stomachs and various other parts, she thought she had proven conclusively that the acid is produced in the canaliculi of the parietal cells. The results leading to the conclusion were that in occasional parietal cells of one animal, rabbit No. 2, the contents of the canaliculi, as well as some intercellular canals and the lumens of some glands, contained blue. In two other rabbits, Nos. 5 and 6, there was blue in the interior of the mucosa, not in the parietal cells or in the lumina of the glands, but on the surface of the cells, remote from the lumen, in lymph-spaces, and in lymphatic and blood vessels and in interstitial tissue. To account for the failure to obtain the reaction in the canaliculi of the cells more frequently, she suggested the possibility that only a few of the gastric tubules or parietal cells are functionally active at one time; also that the acid is removed so rapidly that the experiment generally fails to show its presence.

Harvey and Bensley repeated the experiments, using a variety of animals and stronger solutions. Their results were much the same, except that they failed to get the reaction in the canaliculi of the parietal cells in all but one animal, a kitten, on which they had operated in the midst of the experiment, removing a piece of the gastric mucosa, causing a wound, closing all parts carefully, and letting the animal live five hours before it was killed and examined. They, however, found blue quite constantly in the epithelium of the crypts, in the blood-vessels and the lymph-spaces of the mucosa, in the connective tissue of the muscularis mucosa, in the tunica muscularis of the stomach, in the blood-vessels, bile-capillaries and cells of Kupffer of the liver, and in the blood-vessels of the spleen and of the heart muscle. Their conclusions are obviously opposed to those of Miss FitzGerald. They then turned to indicators that are also vital stains, working chiefly with cyanamine, but getting confirmatory results with phenylated Nile-blue and neutral red. In an experiment of this kind, an animal is quickly killed, a small piece of the stomach mucosa is removed as rapidly as possible, rinsed in normal salt solution and placed in the solution of the dye. After a few minutes the piece of mucous membrane is placed upon a slide, and observed, stained more, or teased apart as desired, and examined with high power. The characteristic finding of these observers was that the contents of the crypts gave a color indicating acidity; of the tu-

bules, neutrality; and of the parietal cells, alkalinity. They took these results as confirmatory of their conclusions from the work with the Prussian-blue reaction.

F. S. Hammett,³ of the Harvard University Medical School, thereupon reviewed the two papers, and decided that the evidence of both tends to confirm the conclusion of Miss FitzGerald. He repeated some of the work with the indicator, cyanamine, got results as had been reported by Harvey and Bensley; but, finding that the acid is diffused more rapidly than the dye, he argued that by the time the latter could reach the cells the former would have disappeared. The indication of alkalinity in the cells, neutrality in the tubules, and acidity in the crypts, is therefore to be expected, and the recorded results are a stable confirmation of the conclusion that the acid is produced as such in the parietal cells.

About two years ago, with a student, I began to repeat some of the work in the laboratories of the University of North Dakota.

In Prussian-blue experiments we have used eighteen animals,—ten rabbits, five guinea-pigs, and three dogs. We have used ferric and ammonium citrate, and in some cases sodium ferrocyanide, in other cases the potassium salt, and have observed no difference so far as the desired result is concerned. We have used varying strengths of solutions,⁴ the weaker solution of Miss FitzGerald, and the stronger solution of Harvey and Bensley, and again with no difference in the result. We have found very toxic effects at times after injection of the weaker solution, and we have failed to get a gross reaction on the mucous membrane of the stomach, at times, with the stronger solution. We have given the solutions, both separately and mixed before the injection, with no difference in the results. We have used animals in various conditions as to food, and again have noticed little difference. Divided and repeated dosage is no doubt better from the point of view of toxicity, but we have obtained a good blue reaction on the mucosa after one large injection.

If I were to direct conditions to obtain a blue reaction on the gastric mucosa most quickly and surely, I should say take an animal shortly after feeding, at the height of digestion, and give it one or two large doses of a stronger solution, killing the animal forty-five minutes or one hour after the last injection; and yet we have failed at times to obtain the reaction under these conditions. When the blue reaction fails to appear

on the stomach mucosa, it is due to the failure of one or the other of the salts to be discharged into the stomach; ordinarily it is the citrate that is scanty or absent, but, in at least one case, we found it to be the ferrocyanide.

Our solutions mixed in the test-tube did not give the blue reaction spontaneously, nor did they do so when left to stand in the laboratory for two or three days. Neither did our solutions develop the blue color when treated in the test-tube with blood-serum or with proper solutions of the salts characteristic of the blood, sodium bicarbonate, sodium carbonate, sodium chloride, disodium phosphate, and monosodium phosphate. They did react with lactic, acetic, phosphoric, oleic, and other acids. Our solutions were always given tepid, and were generally administered subcutaneously. About one-third of our animals died from the toxic effects, and the others were killed by anesthesia about forty-five minutes after the last injection. The urine was tested for the presence of the salts in almost every case, and, in all cases examined, gave a positive test. The stomach contents, or a filtrate of it in case the reaction did not appear on the surface, was usually tested for the presence of the salts with the results given above. In a few cases the contents from the different parts of the stomach were tested separately, as were the contents of the various parts of the intestine, the gall-bladder, and the blood. Nothing that seemed to bear upon the question came from these examinations.

In all of our animals there was a blue reaction in and under the skin at the site of injection. In ten of the eighteen there was a spontaneous reaction of Prussian-blue to be seen on the mucosa of the stomach; in eight there was no reaction. When blue was found it was, as others have reported, about the esophagus or the cardiac opening, along the lesser curvature, and on the surfaces, anterior and posterior to the lesser curvature. It was never in the fundus, and it extended, only very faintly, a few times into the pyloric region.

Tissues for microscopic examination were taken from all cases that gave a gross blue reaction on the surface, and from part of the others. Teased mucous membrane was examined microscopically at once in some cases. The hardening of tissue for section was done by absolute alcohol; later, for fear this might be misleading, since alcohol will sometimes cause the reaction with the salts in solution in the test-tube, neutral formalin and Müller's fluid were used. After seeing

sections from the various methods of hardening, I think there was no need for the precaution. Sections were examined unstained, stained slightly with eosin, or very slightly stained with both hematoxylin and eosin. In seven of our eighteen animals we found spontaneous blue in the deeper tissues other than the skin and fascia mentioned above. So far as the stomach was concerned, if the slide had been made from mucous membrane that had shown Prussian blue grossly, we almost invariably found it on the surface, in the crypts or foveola, and sometimes in or between the surface epithelial cells. Rather rarely did we find it extending down lower than the crypts into the real lumina of the glands, but we did so find it at times. Only a few times out of scores of slides, did we find it in or about a parietal cell. We saw it in intercellular canaliculi and on or in the cells a few times, but we did not find a single cell showing the undoubted intracellular canaliculi pictured by Miss FitzGerald, and described by Harvey and Bensley for the stomach that had received an injury. We found it unmistakably in the interstitial tissue and in blood- and lymph-vessels of the mucosa and the submucosa. We found it in the interstitial tissue of the pylorus and of the small intestine, where none appeared on the surface, also in the liver, kidney, spleen, and lungs.

A typical protocol runs as follows:

Rabbit No. 7: A rabbit not fed for twenty-four hours was given subcutaneous injections of potassium ferrocyanide, and iron and ammonium citrate in three doses, extending over three and one-half hours. A total of 1.6 grams of the citrate and 3 grams of the ferrocyanide were given. Toxic symptoms were present from the first. Voided urine gave a blue test upon the application of hydrochloric acid. The animal was killed forty minutes after the last injection. The skin at the point of injection showed the usual blue. The stomach showed a dense blue on the surface of the mucosa of the lesser curvature, extending down into the pylorus. There was no color in the fundus or the greater curvature. The blood tested negative upon the addition of hydrochloric acid, and also the bile. The urine had a brown-gray color, and gave the blue test upon the addition of acid. Free acid was still present in the stomach contents, since the filtrate was still able to precipitate a solution containing the two salts.

MICROSCOPIC EXAMINATION OF TISSUES

Stomach: Blue slightly present on the surface of the mucosa, and in the blood-vessels at the lower end of the glands, and in the submucosa; not present in any part of the glands proper. Sections made from the pyloric end of the stomach showed blue in the interstitial tissue at the bottom of the glands, but none present on the surface.

Liver: Dense precipitate of blue in the blood-capillaries, large and small; present also in the bile-capil-

laries, and in the hepatic cords. Many nuclei of hepatic cells were dense blue.

Kidney: Precipitate of blue abundant in granular form in the lumen of the tubule and on the surface of the cells lining the same; not found in the glomeruli.

We then turned to indicators that are at the same time vital stains, and have used neutral red, cyanamine, and naphthol blue. Our chief work was with neutral red, a dye that in acidity gives a crimson or deep bluish-red color; in neutrality, an orange-red color; and in alkalinity, a yellow color. We have proceeded in several ways, using it for the most part, 1-10,000 in a normal salt solution. We have repeatedly tested in this dye bits of the fresh stomach mucosa of dogs, rabbits, guinea-pigs, and wild rats. The animals were quickly killed; a little of the mucosa was removed at once (or a bit of mucosa was removed from an animal anesthetized for some other purpose), rinsed in normal salt solution, and immersed in the dye for a few minutes. In the dye the mucosa always assumed a reddish color to gross appearance; under the microscope, any particle of stomach contents that remained and the secretion on the mucous surface and in the crypts were plainly red, the color indicating acidity. Surface cells, injured cells along the cut edges, and now and then a cell of any kind in the tissue were also red. Tubules and capillaries were plainly shown, the former were neutral or alkaline, the latter always alkaline. Intercellular and intracellular canaliculi were generally less conspicuous because of their smaller size, but were also alkaline; now and then the canaliculi of a parietal cell stood out very clearly in an orange color indicating neutrality, if not alkalinity; never in fresh tissue did they stand out as red, indicating acidity."

We varied the technic by separating very small pieces of mucosa upon the slide, and then, governed by the microscope, applying the dye with a capillary pipet to the mouths of glands and to individual cells. The results were the same. Small globules of secretion expressed from the tubules did not take an acid stain. In an effort to bring the dye to the mucosa from the side of the blood-capillaries, we have several times killed an animal quickly, let it bleed, and then injected into the aorta a solution of the dye. The results here always spoke for alkalinity, as above, and not for acidity; even on the surface of the mucosa there was no show of acidity, probably because we have not yet succeeded in getting sufficient of the dye through, though we have varied

the amount and strength of the solution within wide limits.

We have had cyanamine prepared according to Witt by the organic chemist of the University; and, while our preparation was not free from impurities, it gave results that confirm the findings with the other dye. A few tests with naphthol blue gave the same results.

In the meantime Robert Chambers,⁷ using the Barber moist chamber, with which he and others have been making microdissections of cells, injected solutions of neutral red directly into the parietal cells. He reports that, when a comparatively large amount of the dye is so injected, the whole cell, including the nucleus, takes a permanent red color, indicating acidity. When a smaller amount of the dye is placed in a cell, it diffuses through the cell without affecting the nucleus, soon fading in the protoplasm and appearing as orange-red vacuoles under the periphery, only to show anastomosing streams or canaliculi a moment later. The canaliculi communicate with intercellular passages, and these with the tubules. In the intracellular canaliculi the reaction is clearly neutral, if not alkaline; in the tubules the secretion is red, indicating acidity. When the dye is injected into the lumen of a gland, the results are the same, with the parts staining in reverse order.

We must conclude, like Harvey and Bensley and Chambers, that the immediate secretion of the parietal cells is alkaline and not acid.

The experiments with the Prussian-blue reaction cannot be taken as indicating that the normal secretion of the parietal cells is acid. Miss FitzGerald found comparatively few cells in the mucosa of one out of twelve animals that so pointed; Harvey and Bensley found no such evidence; and we, in eighteen animals, have likewise failed. The very infrequency with which the reaction occurs in the cells must mean, upon the most liberal interpretation or granting that some cells do secrete acid, that most of them do not secrete acid. Regional activity, which has been hypothecated, would not seem to be enough to account for the failure to secure the reaction more frequently when one recalls the large amount of acid that is produced. Rapidity of diffusion, which may be granted, must not be invoked until there is better evidence that the acid, as such, comes from the cells. The results by Harvey and Bensley, in the animal in which, by operative procedure, the mucosa was injured, would indicate that the condition that brings

about the reaction, when it does occur, is due to changes brought about by injury, dying, or death of the cells. Moreover, the finding of the reaction in many other parts of the body must invalidate the supposed relation of the cells to acid, as such, completely so far as it can be shown by this method; and it matters not for this purpose whether the reaction be considered typical or not, to what acid it may be due, or when or how the acidity in other parts is produced.

The work with cyanamine, neutral red, and naphthol blue indicates that the normal secretion of the parietal cells is alkaline. The objection that the acid diffuses more rapidly than the dye would seem to be answered by the results of Chambers and ourselves when the dye was applied directly to the cells or even injected into them, though we must grant that we do not know how much diffusion takes place in the short time between the death of the animal and the application of the dye.

The parietal cells may, however, have some relation to the production of hydrochloric acid, as has long been supposed. It is pretty well accepted that the parietal cells contain more chlor-

ine than the chief cells. It has been suggested that the chlorine ions leave the parietal cells combined with a weak base, organic or inorganic, possibly ammonia, which is known to be fairly abundant in the stomach mucosa, and that the base is re-absorbed or absorbed at the base of the crypts. The liberation of hydrochloric acid and the absorption of ammonia by a mould, a penicillium, when grown in the presence of ammonium chloride, has been cited as a possible parallel to the latter part of the process.⁸

REFERENCES AND NOTES

1. FitzGerald: Proceedings of the Royal Society of London, lxxxiii, 56 (1911).
2. Harvey and Bensley: Biological Bulletin, xxiii, 225 (1912).
- See both of the papers cited above for complete bibliography.
3. Hammet: Anat. Rec., ix, 21 (1915).
4. Heliner Engh.
5. Miss FitzGerald used 1.5 per cent potassium ferrocyanide and 0.25 per cent of the double citrate.
- Harvey and Bensley used 10 per cent sodium or potassium ferrocyanide and 25 per cent of the double citrate.
- We used both strengths and in large measure half the strength of the stronger solutions.
6. Experiments upon various tissues showed that cells of any kind, dead for some time, are very prone to take the neutral and the acid stain.
7. Chambers: Lancet-Clinic, March, 1915.
8. Matthews: Text-Book of Physiological Chemistry.

PREMATURE SEPARATION OF THE PLACENTA WITH CONCEALED HEMORRHAGE

By G. J. McINTOSH, M. D.

DEVILS LAKE, NORTH DAKOTA

Premature separation of the placenta, or abruptio placentae, may result in two conditions of hemorrhage—one apparent, the other concealed.

Abruptio of the placenta means a forceable tearing of the placenta from its normal site, and is really an abortion at or near term. If we include the milder cases, this condition occurs oftener than we generally believe, although the complete separation of the high situated placenta is rare, occurring probably once in about six hundred cases. It occurs oftenest at the beginning of full term labor or in the last ten weeks of pregnancy.

Causation.—Its cause may be twofold: first, traumatism; second, diseases of the placenta or decidua. It is probable that, in the traumatic cases, many occur in diseased uteri, as a healthy uterus can tolerate much abuse, such as falls,

kicks, and blows. Of the diseases, chronic endometritis is an important one. Other conditions may be nephritis, degeneration of the decidua, syphilis of the placenta, acute infections, and arterial sclerosis, so that, in the presence of one of these diseases, a slight trauma may cause a separation of the placenta, and, the hemorrhage having started, the blood works its way between the layers of the decidua and completes the separation.

Pathology.—When the placenta separates there must of necessity be considerable hemorrhage, and the uterus being full cannot contract, the sinuses remain open and the inside of the uterus has to stand the force of the arterial circulation. In concealed hemorrhage the blood may bulge out the uterine walls toward the abdominal cavity, and bulge into the cavity of the ovum, while the edges of the placenta remain attached to the uterus, or it may push up the membranes all

*Read at the thirtieth annual meeting of the North Dakota State Medical Association at New Rockford, May 29 and 30, 1917.

the way round, or may break into the liquor amnii. Sometimes, also, the exit of the blood may be blocked by the head of the fetus, or a clot of blood may plug the cervix. Some authorities claim that the uterus at or near full term cannot dilate sufficiently to allow any very large hemorrhage, but experience has proven—and I myself have seen two cases of such—that a fatal intra-uterine hemorrhage may occur before any blood shows externally.

Symptoms.—The severity of the symptoms depends upon the amount of hemorrhage. When there is a history of trauma, the symptoms may not manifest themselves for days. There is generally a pain, varying in severity at the placental site, first, of a tearing character, and later a dull ache, which may have colicky intervals. Next we have the symptoms of acute anemia, and later shock. Dizziness, weakness, shortness of breath, with a feeling of oppression, frequent sighing, ringing in the ears, vision obscured, and thirst may be next experienced. Later on the patient may be restless, delirious, and convulsive, followed by coma and death, if the case runs to a fatal issue. There will be noted also pallor of the cheeks, lips, and gums, eyes sunken, and the conjunctiva pearly. The pulse is generally rapid and small, although not always so at the beginning of these symptoms. A dark bloody serum may now make its appearance after having been expressed from the clot. The abdomen is seen on examination to be much larger than corresponds to the given period of pregnancy, and is hard; and it is difficult to outline the fetus. The woman, generally, can tell that fetal movements have ceased, and the fetal heart cannot be heard by auscultation. Labor is usually very slow, and in many cases the woman dies, undelivered, of hemorrhage and shock. If the mother is saved, the child is almost invariably lost. Even if the mother survives the removal of the fetus and masses of clots, she is still in danger from the postpartum atony of the uterus, due to the great distention.

Diagnosis.—In cases of great internal hemorrhage, with little or no external escape of blood, the diagnosis may be made from the fact that the constitutional symptoms are so much more severe than the amount of visible blood would be likely to account for. Shock may exist when there is no great loss of blood, and may be caused by enormous distention of the uterus. The escape of serum by the vagina, even in small amounts, in the presence of the above symptoms is very

significant of the presence of blood-clots in the uterus. Acute abdominal pain, generally at one side of the uterus, sudden increase in the size of the uterus with a tense abdominal wall, absence of fetal heart-sounds, and increasing anemia and shock, form the foundation of a reasonably sure diagnosis.

In the differential diagnosis we have to eliminate rupture of the uterus and extra-uterine pregnancy, as well as placenta previa. More rarely we may think of surgical conditions as gall-stone colic or abscess, and rupture of an appendiceal abscess, or other abscesses in the pelvis. In the case of concealed hemorrhage there are a sudden onset, generally pain at the placental site, and internal hemorrhage, often severe, and usually only one hemorrhage; and we may find a trauma. In placenta previa the onset is quiet, with no pain, having the hemorrhage always external. At first there is one, generally mild; and then there are several, with usually no cause. Rupture of the uterus generally follows a protracted or obstructed labor, or operation. In rupture of the uterus the membranes are usually ruptured, and the escape of the fetus into the abdominal cavity may be seen to cause two abdominal tumors.

Ectopic gestation is indicated by the history of the finding of the empty uterus, alongside the fetal tumor mass, and by the absence of contractions in the uterus.

The prognosis depends much upon how early the physician sees the case. This is one of the gravest conditions with which the obstetrician has to deal; and, at a conservative estimate, over 50 per cent of mothers and 95 per cent of babies are lost,—that is, in cases of complete detachment of the placenta, a larger percentage is saved if the separation is incomplete, or if the case is seen early.

In regard to the treatment: No hard and fast rule can be laid down in this condition, as we may do in placenta previa. We must empty the uterus and control hemorrhage, and, in nearly all cases, relieve anemia. Since the child is almost always lost, we pay little attention to it, but direct our efforts to saving the mother. The condition of the cervix will generally guide us in our method of delivery. If the cervix is soft and partly dilated, or dilatable, we may complete the dilatation manually, and use forceps or version. If the cervix is closed tightly and an internal hemorrhage is going on, we have a very formidable condition on our hands, and no time

should be lost in procuring plenty of assistance, in order to be ready for any kind of operative delivery and for the hemorrhage that may follow on account of the atonic condition of the uterine walls. If the woman's condition admits, and we judge the hemorrhage has not yet been heavy, we may rupture the sac or bring on labor by packing and giving fluid extract of ergot, 30 minims, every two hours, or small doses of pituitary extract. The woman should be closely watched, and when dilatation has sufficiently advanced, we complete the process manually, and deliver. If the patient is in a hospital and in competent hands, Cesarean section may be performed when the cervix is tightly closed, if there is not too much shock.

CASE 1.—The patient, a multipara, aged 27, had three normal labors, and was always in good health. According to the husband's statement, she expected to be confined about April 30, 1917. On February 21, she, in a spirit of fun, lifted her husband, a man of 175 pounds, off his feet. That evening she felt considerable pain in the left lower quadrant of the abdomen. All during the day of February 22, the dull pain continued, and she said the abdomen enlarged on that day to an extent beyond normal. February 23, she remained in bed all day, the pain increased, the distention was very marked, and she felt weak and dizzy. She did not think it serious enough, however, to call a physician. I was called to see her at 6 A. M., February 24, and found her in a condition of shock. She complained of dizziness, shortness of breath, and faintness. Her skin showed great pallor, her cheeks and gums were white, the extremities

cold, and the pulse was 130 and very thready. The abdomen was much distended and tense, and no blood had as yet escaped externally.

While washing up to examine her, there was a great gush of thin, very dark-colored fluid. So great was the amount that I concluded that the sac had also ruptured; but such was not the case. The cervix was soft and easily admitted two fingers, and I could feel the edge of the placenta near the presenting head. I had her removed to the hospital at once. After consultation, a rapid manual dilatation was accomplished, and forceps used, it being decided that this was the only possible remedy that held out any hope for saving her.

After extraction of the baby, a very large amount of dark clot was removed. There was no more hemorrhage, for she was apparently bled dry. In spite of all effort at stimulation, she lived but an hour after the baby was delivered.

CASE 2.—A multipara, aged about 35, had had six normal labors, and was now pregnant seven months, I was called in consultation with her attending physician. Here also trauma, suffered two days before by a fall down a stair, was the exciting cause. Without going into details, I may state that her symptoms and condition were very similar to those in the first case. While making a digital examination, the thin, dark blood gushed away in a very large amount; and she expired very suddenly while preparations were being made to extract the child.

I may say, in conclusion, that many of these fatal cases can be avoided by calling a physician early, when the condition can be recognized and prompt measures taken to insure at least the life of the mother. In both the above cases, no physician was summoned until the intra-uterine hemorrhage had attained fatal proportions.

HISTORY OF THE UNIVERSITY OF MINNESOTA BASE HOSPITAL NO. 26

By ARTHUR A. LAW, M. D., F. A. C. S.

Major M. R. C., U. S. A., and Director Base Hospital No. 26

The mobilization of the University Base Hospital was ordered from Washington in December, and was accomplished in a few days. As it is made up in the main from the University Medical School and the Mayo Clinic, it possesses special interest to the medical men of the Northwest, and its work will be carefully observed by the profession of this section. Because of this interest, we give Major Law's account of the organization of the Unit.—THE EDITOR.

In October, 1916, Major W. J. Mayo was asked by the Surgeon General to organize a base hospital. Major Mayo felt that this project properly belonged to the Medical School of the University of Minnesota, the hospital to be known as University of Minnesota Base Hospital No. 26. He expressed a desire to collaborate with the University, and to give from the Mayo

Clinic fifty per cent of the professional personnel and as many of the enlisted and nurses' personnel as were required. He also pledged the Clinic to contribute fifty per cent of the necessary financial support. Dr. A. A. Law, of the University Clinic, was tendered and accepted the directorship.

On the first of April, 1917, the government requested that the organization of this hospital be commenced. The real organization was started April 15th, the Doctors Mayo contributing fifteen thousand dollars, the patriotic citizens of Minneapolis fifteen thousand more, while the Red Cross donated ten thousand dollars' worth of surgical supplies. Dr. L. B. Baldwin (now Major), Superintendent of the University Hospital, volunteered to act as purchasing agent. This duty he discharged with a fidelity and efficiency which

permitted the complete equipment of the hospital by July 10th, notwithstanding the fact that the war made the market conditions almost impossible. By July 1st all officers, enlisted men, and nurses had been recruited to full strength. On July 10th Major Law wired the Director General of Military Relief that Base Hospital No. 26 was fully equipped, recruited and ready for active duty.

Then followed a period of tedious waiting, which proved particularly irksome to many who under the stress of the hour had given up lucrative positions. It was, however, gratifying to realize that in the time of the nation's need the medical corps and the medical profession were ready. The doctors, of course, were trained in their particular specialties, and with some added training to make them soldiers, were fit to meet emergencies. The army was in the making and did not yet need the thoroughly organized and equipped base hospitals.

The citizens of Minneapolis and Rochester were prodigal in their gifts to the hospital. Mrs. Edmund Pennington, known as the "fairy god-mother" of the hospital, with the help of the Office Men's Club, organized a patriotic ball game which netted thirty-six hundred dollars for the contingent fund. Mrs. Charles Pillsbury gave her own Packard touring car. The Minikahda Club gave a Ford touring car. Mr. C. C. Bovey gave a motorcycle with a side car. Mr. and Mrs. C. J. Winton and Mr. and Mrs. Charles Lewis each gave a complete army motor ambulance; as did Mr. Benjamin H. Woodworth, Mr. George Stricker and Mr. Allen Ramsey conjointly. The contingent fund enabled the director to purchase a large amount of highly specialized equipment in the way of instruments and scientific apparatus, which the government requirements did not demand, but the specialists of the corps were earnestly desirous of having, as it would increase their efficiency.

The enlisted personnel of the corps, one hundred and fifty-three in number, were picked men, —picked from fifteen hundred applicants. In each specific instance the man was picked because of some peculiar qualification. A large percentage have had military training or drill; and a large percentage are college men. Every conceivable contingency has been provided for in the way of picking men who are qualified for immediate emergency; for example, we have in the corps trained wireless operators, telegraphers, gasoline, steam, and electrical engineers.

carpenters, machinists, constructors of x-ray apparatus, telephone constructors, plumbers, undertakers, plasterers, ambulance drivers, pharmacists, male nurses, tailors, barbers, stenographers, and clerks. As a matter of fact, every profession on which we might have to call is represented in the corps. The skeleton non-commissioned staff has been chosen from men who have had wide experience in the army, in guard regiments, in military schools, and on the border. Only enough non-commissioned positions have been filled to permit of organization; all the other positions are open to members of the corps. There is a fair field and no favor. The positions will be filled on their merits. The officers are, each and every one of them, specialists in their own particular line of endeavor. The director saw service as a medical officer with the regulars and volunteers in the Spanish-American war and the Philippine insurrection in the Philippines.

The careful planning of the minutest details of organization bore its own reward when on December 13, 1917, the War Department flashed the message to mobilize. The individual cogs were so perfectly meshed that when a button was pushed the gears started to revolve without lost motion, and notwithstanding the fact that officers and men were scattered from New England to California, from Oregon to Florida, and from Minnesota to Texas, within four days the Unit was mobilized and reported they were waiting for orders to entrain.

The University felt a proper pride in this Unit, and when the order to mobilize came, tendered the director the use of its beautiful buildings and quarters. The great laboratories in Millard Hall and the auditorium in the Main Engineering Building were cleared out and turned over to the men for their barracks. The corps was fed at the Men's Union; guards were posted, officers of the day shouldered their burdens, and they started to be in truth what they were, soldiers.

All equipment in the way of overcoats, clothing, blankets, and cots had been issued; the corps was completely equipped. The intricate machinery of administration was running smoothly, and they were awaiting orders to proceed to Fort McPherson, Georgia, there to report for duty and preliminary training prior to embarking for "over there."

STAFF OF THE HOSPITAL

Major Arthur A. Law, Director and Chief Surgeon, University of Minnesota.

Major S. Marx White, Chief of Medicine.
 Captain E. C. Moore, Los Angeles, Calif.,
 Mayo Clinic.

Captain John Bentler, Quartermaster.

Captain Charles A. Reed, Orthopedics, University of Minnesota.

Captain Carl Fisher, Ophthalmology and Otolaryngology, Mayo Clinic.

Captain Angus Morrison, Neurologist, University of Minnesota.

Captain Robert D. Mussey, Mayo Clinic.

Captain John Staly, University of Minnesota.

Captain Gilbert J. Thomas, Urology, University of Minnesota.

Captain Harry B. Zimmerman, University of Minnesota.

Captain David M. Berkman, Mayo Clinic.

Lieutenant Alexander B. Moore, Röntgenologist, Mayo Clinic.

Lieutenant W. W. Bissell, Chief of Laboratory, Mayo Clinic.

Lieutenant Moses Barron, Pathology, University of Minnesota.

Lieutenant Archibald Beard, University of Minnesota.

Lieutenant James M. Hayes, Mayo Clinic.

Lieutenant O. M. Klingen, University of Minnesota.

Lieutenant Fred Rankin, Mayo Clinic.

Lieutenant Thomas Snodgrass, University of Minnesota.

Lieutenant Thaddius L. Szlapka, Mayo Clinic.

Lieutenant Gordon M. Clark, University of Minnesota.

Lieutenant Taylor B. Smith, University of Minnesota.

Lieutenant Everett McDougall, Dentist, University of Minnesota.

Chaplain Bishop William P. Remington, St. Paul's Church, Minneapolis, Minn.

The Hospital Unit with its exceedingly fine body of men left last week for Fort McPherson, Ga., but the nurses of the Unit will not leave until the Unit is called to active service.

—THE EDITOR.

MISCELLANY

A TUBERCULOSIS DAY PRAYER

The writers of prayers have put into literary form suitable for ecclesiastical use some of the profoundest thoughts of all ages; and it is not unusual to find such prayers dealing with the problems of the physical sciences, as well as with the purely metaphysical. We find such a thought in a prayer written by Professor Walter Raudenbush, of the Rochester (N. Y.) Theological Seminary. Professor Raudenbush is one of a small group of thinkers of world-wide reputation. In his prayer for the tuberculous are found the following words:

Since we are all jointly guilty of the conditions which have bred their disease, may we stand by those who bear the burden of our common sin, and set the united will of our community against this power that slays the young and strong in the bloom of their life. May this death that creeps from man to man be a solemn reminder that we are all one family, bound together in joy and sorrow, in life and death, that we may cease from our selfish indifference and together seek Thy Kingdom and Thy righteousness which will bring us health and life.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
 The Official Journal of the
 North Dakota and South Dakota State Medical Associations

W. A. JONES, M.D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M.D. - - - - Aberdeen, S. D.

H. J. ROWE, M.D. - - - - Casselton, N. D.

H. E. FRENCH, M.D. - - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - - Minneapolis, Minn.

JANUARY 1, 1918

WAR TENSION

The war, with all its problems and the consequent charged atmosphere of excitement, strain, uncertainties, and delays, has contributed enormously to the nervous and mental unbalance of the people of the whole world. It is not uncommon to hear the complaint that it is difficult to settle down to any sort of mental effort without first clearing one's mind of all these straining problems; and even then some find it easier to turn to fiction and other light reading than to deal with the problems of the day. This is probably a mistaken impression that many have assumed to be unsurmountable. As a matter of fact, when one has to do with vexing and strenuous conditions outside of the routine of life, it is far more restful and, in a sense, far better that mental exercise take the place of trivial literature of the day. The constant reading of newspapers with their unconfirmed reports, their speculative theories, and the mass of stuff that is written for effect, leads one to mind-wandering, whereas a book which contains ideas and suggestions which require the application of the mind, very soon produces a quieting and a restful effect. Men who read with a purpose in mind and who enjoy good literature soon find that they are able simply to glance at the lighter vaporings, and really and substantially enjoy the mental diversion produced by something that is either profound or entirely different from what they are accustomed to.

In spite of this, however, our attention is propelled toward, not only military, but medical, problems which are born of the present conflict; and they have become so magnified that it is quite likely that the whole nomenclature of medicine may be changed to a very appreciable degree. For instance, we are observing daily the carelessness with which soldiers are selected for the service; and, even with our present outlook, we see many serious problems which are not only interesting but absorbing, and which make us gasp and wonder at our former inactivity, our former failure to see things as they really were. The men in war, even in the trenches, are aware of this; and, knowing so little about what is going on in other sectors and in other countries, they apply themselves to good reading and find that they are diverted from their strains and are rested by their mental exercises. It has been noted, time and again, that soldiers carry with them small books by famous authors which contain, not only useful information, but suggestions which are entirely foreign to the life they are leading at the present time.

It should be the duty, then, of everyone, whether in or out of service, to devote a certain portion of each day to the study of good literature. The man who makes an excuse that his time and mind are so occupied by the horror of the present year that he cannot do this, is really mentally lazy, and he should forswear the temptation to read only what occurs over night. In this way he keeps his mind clear, he is capable of absorbing better things, and he comes out of the wreck with a cleaner purpose in mind and accustomed to better things, better ideas, and a better expression of these ideas.

The warlike atmosphere which surrounds us now is likely to continue for a long time; and therefore why should we all go to pieces by speculating on the uncertainty, the outcome, and the final results of the great cataclysm?

Someone has suggested that, after the war, the returned soldiers will be in a very embarrassing position, especially because their whole manner of life will have been changed. They are accustomed to the rigors and diversions of out-of-door existence, and they have had an opportunity to think very deeply; but, when they come back to their ordinary sedentary positions, they will be restless and hampered by the feeling that war has inspired. Doubtless many of them will be eligible to better places; but many of them must go back to the same old drudgery that they

were accustomed to, and many of them will find the old life, both physically and mentally, very burdensome, if not intolerable. This country, as well as all other countries, is scheduled for a period of great unrest; and the final adjustment of the individual to his old or his new surroundings is one complicated with fear and uncertainty. It is not likely that the men who come back from the present war will drift into the same degree of indifference as those who fought in and returned from the Civil War, because conditions are very different. Business has increased and expanded to such vast proportions that the man who comes back with the loafing idea in his mind will be pushed into some sort of service which will keep him from growing stale. Of course, a certain number will be drifters always, but that depends upon the labor situation when it comes to a final settlement. All countries will have new problems to meet and solve, and the survival of the fittest will be the rule unless human nature has changed its methods. Many men have gone into service who have perhaps never been successful in civil life, but their new activity, and the regulation and training of the war, will make them more fit, and they will probably assume positions of dignity and business activities that they have been heretofore unable to fill. Hence the ultimate and final problem is the disposition of the individual.

FOOD SUGGESTIONS

Plain and wholesome foods for all people is evidently the problem of the day, and any good suggestions which may be offered for the study of foods and their relative values are valuable. Probably, if one would go down among the plain people and the people who live strictly within their means, and yet are healthy and comfortable, one would find these suggestions unnecessary; but it is a fact that a great many families are suffering from a lack of proper foods because their foodstuffs are improperly prepared, and no attention is paid to the value of the different articles which are not only nutritious, but keep up the general health.

THE JOURNAL-LANCET ventures to present, and to emphasize the value of, a few recipes copied from Patten's "Practical Dietetics." Rice probably is used much less than other cereals, and yet, in proper combinations, it contains a relatively high caloric value. The following recipes give palatable dishes with high food values, which physicians may strongly recommend:

PLAIN RICE PUDDING, 746 CALORIES (individual rule)

One cup steamed rice, 1 cup scalded milk, $\frac{1}{2}$ tablespoon butter, 1 egg, 2 tablespoons sugar, $\frac{1}{2}$ saltspoon salt, $\frac{1}{4}$ cup stoned raisins. Scald milk and add butter. Beat egg, add sugar and salt, and pour on slowly the scalding milk. Put in pudding dish with rice and raisins. Bake in a moderate oven until custard is set. Serve with hard sauce. Note.—Do not use raisins in case of bowel trouble.

CREAM OF RICE PUDDING, 657 CALORIES (three servings)

One-fourth cup rice (well washed), 2 tablespoons sugar, grated rind of one-third lemon, 1 saltspoon salt, 1 pint milk. Mix all ingredients in a small baking-dish. Bake two hours, slowly at first until rice is softened and thickened in the milk. Cut the crust several times, stirring to the bottom gently. The crust will then dissolve in the pudding, giving it a creamy color. Then let it brown slightly.

IRISH MOSS JELLY, 677 CALORIES (three servings)

One-half cup Irish moss, 2 cups boiling water, 4 figs, juice of 1 lemon or orange, $\frac{1}{3}$ cup of sugar. Soak, pick over, and wash the moss. Put it into the boiling water, add the figs cut into strips, and simmer about twenty minutes, or until it is very thick when dropped on a cold plate. Add lemon juice and sugar. Strain into a cold, wet mold.

HOMINY AND DATES, 378 CALORIES (one serving)

One-fourth cup of fine hominy, $1\frac{1}{3}$ cups boiling water, $\frac{1}{4}$ teaspoon salt, 6 Dromedary dates. Put the hominy, water, and salt in top of a double boiler, and cook two hours. Add more boiling water if mush seems stiff and thick. Stone and chop the dates, and add to the mush about three minutes before serving. Dates are delicious served with rice or combined with any cereal.

OATMEAL MUSH FOR CHILDREN AND INVALIDS, 880 CALORIES (four servings)

One cup granulated oatmeal, 1 teaspoon salt, 1 scant quart boiling water. Put the oatmeal and salt in a double boiler, pour on the boiling water and cook three or four hours. Remove the cover just before serving, and stir with a fork to let the steam escape. If the water in the lower boiler be strongly salted, the oatmeal will cook more quickly. Serve with sugar or salt and cream or milk.

Note.—Baked sour apples, apple sauce, and apple jelly are delicious eaten with oatmeal. They should be served with the mush, and sugar and cream poured over the whole. They give the acid flavor which so many crave in the morning. Coarse oatmeal is not advisable in any form of water brash, acidity or bowel irritations. It often causes eruptions on the skin in warm weather.

CAUDLE, 404 CALORIES (one serving)

One-fourth cup Scotch oatmeal, 2 quarts water, salt to taste, $\frac{1}{2}$ cup raisins, juice $\frac{1}{2}$ lemon, sugar, and cinnamon. Boil the oatmeal, water, and salt four or five hours. Strain; if too thick, add a little hot water and whip it with a wooden spoon. Remove seeds from raisins, cook a short time in hot water, and add raisins

and water to above. Add lemon juice, and sugar, cinnamon to taste.

"JUMPING THE CLAIM" OF THE ABSENT DOCTOR

When a large number of physicians were called into the service of the country upon the declaration of war, it was impossible for many of them to dispose of their practices, either by outright sale or by obtaining a substitute during their absence. The men who remain behind have generously agreed to do all they can in the care of such abandoned practices, dividing the fees obtained from the patients of the absent physician with his family. This plan is working splendidly in many places, and the high motives upon which the plan was conceived will generally carry it over the rough places; but an inevitable condition has arisen which is causing real bitterness on the part of some absent men. This was inevitable; and it seems to us that in every such case serious trouble is more easily avoided than mended when high passions have been created. It should not be forgotten that each side has rights, and, moreover, that it is never wise to overlook the other fellow's rights.

Let us consider a typical case or two. In a village with from two to four physicians, one of them is called to the M. R. C. without leaving a substitute to whom his patients can turn for care during his absence.

If there has been an undue share of the jealousies that are too often found among physicians, many of the absent man's patients will not readily call in one of the family physician's rivals; and this creates a condition ripe for trouble.

If the absent physician has left a large and lucrative practice, the fact will soon become known, and a new man will appear upon the field. This will inevitably spell trouble, and it has done so, and the trouble will be magnified tenfold when the "captain" or the "major" returns to his old practice. It is clear enough that the man who knowingly and intentionally takes advantage of such a situation is a "claim jumper," and may be dislodged by lawful or unlawful means—rather, we should say, an attempt to dislodge him will be made in this manner. But the newcomer may be wholly unconscious of an infringement of any rights of another, especially of one called to the colors of his country. He may have planned even before war was declared to begin practice in that village, and may never have given a thought to the absence of one or

two of the physicians of the village. Moreover, he has a legal right to go where he will. If intent to purloin the patients of the absent physician or physicians cannot be fixed upon him, wholesale condemnation of him is dangerous, even though his moral or, at least, his professional standard does not seem to measure up to the occasion.

More complications arise when a new man begins practice in a village whose only physician has been called into war service, and in such case the absolute need of a physician has to be considered.

Still another complication is found in the fact that many men have gone into the M. R. C. not intending to resume practice at the old stand.

With these and similar conditions complicating each case, is it not apparent that it is easier to avoid serious trouble by a frank handling of the case at the beginning than to settle it upon the return of the man who feels that he has been injured? The man who has deliberately injured his brother who has made great sacrifices for his country, as do most of the men who enter the M. R. C., cannot fail to see that he will have to deal with a public opinion more easily excited to vengeance than allayed even by argument against its injustice if injustice actually exists in its punishment of what seems to be wrong.

The practical application of our suggestion is that these troubles be settled when they arise, and the best way to settle them is by reference to a board of conciliation, whether consisting of one man or of ten men. Such course is far better for the physician accused of taking advantage of a brother at his post of duty on the firing-line, and the absent patriot need have no fear of the outcome of his grievance before any board.

MEDICAL APPOINTMENTS BY THE GOVERNOR OF MINNESOTA

Governor Burnquist has anticipated the rush of suggestions and advice for the annual appointments to the various state boards, and has been guided by a few things which have occurred during the past year or two. The appointments on the State Board of Health are as follows: Dr. George Douglas Head, of Minneapolis, is appointed in place of Dr. W. A. Jones, of Minneapolis. Dr. Roscoe Cadwell Hunt, of Fairmont, succeeds his father, who has been on the Board two or three different times. Dr. Neill M. Watson, of Red Lake Falls, takes the place of Dr. Charles W. More, of Eveleth. One of

the surprises of the Governor's appointments is in the Advisory Commission. Dr. H. Longstreet Taylor, of St. Paul, who has been on the Board for several years, is supplanted by Dr. Charles W. More, of Eveleth, who was transferred from the State Board of Health to the Advisory Commission.

These appointments are presumably entirely satisfactory, and it is well perhaps for the various state boards to be infused with new material from time to time, in order that the members may not grow stale. Doubtless there is some political influence behind these, as with all, appointments of this sort; and no one need feel disappointed at the result of the Governor's appointments.

THE MINNESOTA SOCIAL HYGIENE COMMISSION

The above-named commission was organized and its members nominated by sixteen medical and social bodies in Minnesota, and it is composed of men and women of recognized efficiency. Its organization and membership were approved by the Public Safety Commission of Minnesota, and the members were then appointed by Governor Burnquist.

The State Board of Health will confer upon the Commission power at law for the regulation and control of venereal diseases. Its work should be closely watched by all medical men.

The following compose its membership:

1. A Bureau for the Control of Venereal Diseases: Dr. R. O. Beard, Chairman; Dr. E. T. Bell, Dr. H. M. Bracken, Dr. A. J. Chesley, Dr. Charles D. Freeman, Dr. W. A. Jones, Dr. Charles H. Mayo, Dr. L. G. Rowntree, Dr. E. L. Tuohy, and a Director.

2. A Committee on Law Enforcement and Legislation: Mr. W. A. Anderson, Chairman; Mrs. Charles C. Bovey, Mr. Henry F. Burt, Mr. C. F. Cairns, Rev. Father James M. Cleary, Hon. Richard Jones, Mr. Joseph R. Kingman, Hon. F. H. Peterson, Rev. Dr. Marion D. Shutter, and Mrs. Thomas G. Winter.

3. A Committee on Education: Hon. C. G. Schulz, Chairman; Dr. Henry Wireman Cook, Mr. A. B. Driscoll, Miss Edna G. Meeker, Dr. Frank Nelson, Mrs. Marion D. Shutter, Dr. S. E. Sweitzer, Dr. Mabel Ulrich, Mr. W. F. Webster, and Mr. W. L. West.

4. A Committee on Social Service: Dr. Carol Aro-novici, Chairman; Mr. Gilbert Byron, Mr. Charles N. Chadbourne, Hon. E. A. Lewis, Mrs. Charles T. Moon, Mrs. Fannie French Morse, Mr. Charles L. Sommers, and Mr. Charles Strauss.

5. A Committee on Protective Work: Mrs. Gustav Schwyzer, Chairman; Mrs. C. G. Bates, Miss Gertrude Murrell, Mrs. C. A. Reed, Mrs. Irma W. Stacy, Dr. Arthur H. Taylor, Mrs. Harold K. Weld, and Mr. S. Wirt Wiley.

EVERY DOCTOR IN THE MEDICAL RESERVE CORPS!

What an ideal situation it would be if every doctor in the United States who is mentally, physically, and morally fit, was in this Corps.

The time is coming, and in the immediate future, when the Medical Reserve Corps of the Army must be immensely augmented, and so as to enable the Surgeon General to have at his command for immediate assignment, as conditions demand, a sufficient number of trained medical officers, let us take the above thought seriously.

We all know, from past history, the conserving value of an efficient medical corps, and this means number as well as training.

A statement made by one high in authority in the Surgeon General's office, "that our fighting forces would be decimated by sickness and casualties in six months, were it not for an efficient army Medical Corps," clearly emphasizes the importance of every doctor in the United States, meeting the requirements above referred to, accepting a commission in the Medical Reserve Corps of the United States Army.

The struggle in which we are now engaged, and in which we are preparing to take such a prominent part, depends for its success as much upon the medical profession as it does upon our combatant forces, and while we do not know that any such intention as herein suggested is in the mind of the Surgeon General, it would at least give him the necessary corps of medical officers upon which to draw, and thus serve the best interests of our country and the best interests of the medical officer serving.

BOOK NOTICES

THE PRESCRIPTION. Fourth Edition. By Otto A. Wall, Ph. G., M. D. St. Louis, Mo.: C. V. Mosby Co. Price, \$2.50.

This book covers in a complete and thorough manner the whole subject of prescription-writing. It also contains a very interesting history of prescription-writing and other matters of interest to physicians and pharmacists.

—ANDERSON (A. E.).

GENITO-URINARY SURGERY, AND VENEREAL DISEASE, 10th edition. By Edward Martin, A. M., M. D., F. A. C. S.; John Rhea Barton, Professor of Surgery, University of Pa.; Benjamin A. Thomas, A. M., M. D., F. A. C. S., Professor of Genito-Urinary Surgery in the Polyclinic Hospital and College for Graduates in Medicine; Instructor in Surgery, University of Pa.;

and Stirling W. Moorhead, M. D., F. A. C. S., Assistant Surgeon to the Howard Hospital, Philadelphia, Pa. Philadelphia: J. B. Lippincott & Co. Price, \$7.00.

The tenth edition of White and Martin's book on genito-urinary diseases has been brought up to date. The volume is rather large and should serve as an excellent hand-book for the student, not as a detailed reference book.

The section on stricture is good. One may, however, disagree with the suggestion that the urethra should be anesthetized before dilatation.

The treatment of gonorrhea is merely outlined.

In the preface Dr. Martin states that he does not believe that the Wassermann fast luetic should be subjected to prolonged treatment. This is quite in accord with the accepted teachings of the present day, always remembering that the patient must have gone through adequate courses of treatment over extended periods before arriving at the conclusion that the Wassermann is fast.

The book is printed on a fair grade of paper. The halftones are very good. The differential diagnoses under the heading of syphilis are especially valuable to the student.

—MICHELSON.

HANDBOOK OF GYNECOLOGY FOR STUDENTS AND PRACTITIONERS. By Henry Foster, M. D., and Alfred de Roulet, M. D. St. Louis: C. V. Mosby Co., 1917. Price, \$4.00.

This book contains about four hundred and fifty well-written pages with one hundred and seventy-seven illustrations. It is intended to be a concise treatise of the diseases of women, and is based on a classification of these conditions, which is somewhat different from that in ordinary use. The authors have tried to follow a grouping of diseases based on pathology and pathogenesis, rather than anatomy.

The authors give briefly the main points in the anatomy, physiology, etc., of the female generative organs.

Asepsis, general surgical principles, and technic are considered, and some valuable points in diagnosis are given.

Congenital, traumatic, various infections, and neoplasms are concisely described, so that the reader acquires the essential points in that special field of medicine and surgery.

—ADAIR.

REPORTS OF SOCIETIES

THE MINNESOTA ACADEMY OF MEDICINE

The Society held a stated meeting on December 12, 1917.

Preceding the scientific part of the program, members and guests stretched their legs as usual for an hour under the dinner table, which, by the way, is a very enjoyable feature of our monthly gatherings; indeed, it is so enjoyable that sometimes it is difficult to get the members

to break away from the delights of social intercourse and settle down to business.

The meeting was called to order by the president, Dr. Cross.

The next order of business being that of election of new members, it was moved that there be no election at this time, but that it be made a special order of business for the next meeting.

Dr. J. Warren Little gave a short report of three cases. The first was that of a child, one month old, on whom he had operated for intussusception. He made an incision through the right rectus muscle. Considerable trouble was experienced in locating the telescoped bowel. It was finally found up under the stomach. Five inches of the ileum had turned into the cecum through the illeocecal valve. This was released and reduced. The freed gut was fastened by catgut so that its re-invagination could not occur.

A second case was that of a woman hurt in an automobile accident. Beside a severe injury to the abdomen, she sustained a Pott's fracture of the right ankle. On opening the abdomen it was found filled with stomach contents, the rent being in the first part of the duodenum. In extent the wound was about one and one-half inches long. It was closed, and the abdomen washed out. Thus far (the accident occurred the day before) she is doing well.

A third abdominal case was that of a man twenty-one years of age who was taken violently ill with pain in the abdomen. Upon opening the belly it was found that three feet of jejunum had telescoped into itself. Much difficulty was experienced in freeing it, some seven or eight hours having elapsed since intussusception took place. The gut was liberated, however, without cutting. The man made a good recovery.

Dr. R. E. Farr showed a carefully prepared specimen of the urinary tract, including both kidneys, both ureters, and the bladder. A suprapubic cystostomy had been performed eight days before death in a man of seventy who had for years suffered from an enlarged prostate. Microscopically, the prostatic enlargement showed adenoma. Both kidneys were enlarged, the ureters dilated, and the bladder-wall greatly thickened.

He also related the case of a man on whom he had very recently performed a colostomy, showing by diagrammatic sketches some of the complications met with. The individual already had had his colon short-circuited some time before. The Society would be pleased to know if this man survived, for, if he did, it would be

a great satisfaction to know that nature's handiwork may be so safely and advantageously readjusted.

Dr. Staples read a paper on "Portal Cirrhosis," and Dr. Earle a thesis on "Fractures of the Skull." Both papers were fully discussed.

There were thirty members and three visitors present.

F. E. LEAVITT, M. D.,
Secretary.

THE CLAY-BECKER COUNTY SOCIETY

At the annual meeting of the Clay-Becker Medical Society, the following officers were elected for the current year:

President, Dr. J. W. Mieghan, Ulen; vice-president, Dr. E. W. Humphrey, Moorhead; secretary-treasurer, Dr. F. W. Briggs, Moorhead; delegate, Dr. C. W. Simison, Hawley; alternate, Dr. H. C. Thornby, Barnesville; censor (three years), Dr. G. L. Gosslee, Moorhead.

The program for the evening was a symposium led by Dr. Giffin, of the Mayo Clinic, on "Diseases of the Blood and Spleen," illustrated by lantern slides.

The members of the Cass County Society of North Dakota were invited guests.

F. W. BRIGGS, M. D.,
Secretary.

NEWS ITEMS

Dr. H. C. Otto has moved from Vergas to Frazee.

Dr. L. J. Guyer has moved from Crookston to Granite Falls.

Dr. A. P. Kimball has moved from Colome, S. D., to Wimmer, S. D.

The Valley City Hospital, at Glasgow, Mont., was opened last month.

Dr. A. A. McLaurin has moved from Rapid City, S. D., to Pierre, S. D.

Dr. C. W. Hollister, of Pierre, S. D., has given up practice on account of ill health.

Rice Lake, Wis., has started a campaign to raise \$75,000 for a hospital for that city.

Dr. James Farrage, formerly of Breckenridge, has located at Winnebago, taking over the practice of Dr. F. L. Durgin.

Lieut. John H. Kirkham, of Langdon, N. D., now at Camp Funston, Kas., has been promoted to a captaincy.

Dr. Theo. S. Paulson, of Tyler, has been doing special work in the Chicago Eye, Ear, Nose and Throat College.

Dr. W. M. Lancaster, of Powers Lake, N. D., has fitted up a hotel building of that place for hospital purposes.

Lieut. T. R. Campbell, of Arthur, N. D., is said to be the first North Dakota medical man to be in service in France.

The Baldwin Hospital of Redfield, S. D., was opened last month. It is the private hospital of Dr. F. McK. Baldwin.

The Swedish Hospital of Minneapolis will celebrate its twentieth anniversary, with appropriate exercises, on January 4.

Dr. H. M. Guilford, the Health Commissioner of Minneapolis, has put a ban upon beds in basements, as required by a state law.

The physicians of Parker, S. D., have joined with other prominent citizens to urge the need of a gymnasium as a health measure.

Capt. Franklin R. Wright, of Minneapolis, has been honorably discharged from the M. R. C., because of physical disability for service.

Dr. Charles H. Aylen, of Drayton, N. D., has joined the Canadian Medical Corps, with the rank of captain, and has gone to France.

Drs. Ralph Denning, of Mercer, N. D., and Frank E. Weed, of Park River, N. D., have been recommended for commissions in the R. M. C.

Dr. Wm. Black, formerly of Gaylord, is now associate with the clinic of Drs. Holbrook, Solmer and Osborn, of Mankato, in the department of internal medicine.

Dr. J. P. Brastad, of Oakes, N. D., has sold his practice to Dr. Munier of that city, and will move to California after completing a special course in eye, ear, nose, and throat work in Chicago.

St. Paul is again having an increase in smallpox cases. Dr. Ohage, the City Health Officer, can be depended upon to enforce the vaccination ordinances.

Butte, Mont., has had an epidemic of smallpox, and the city and county health officers had a conference with the Montana State Board of Health on the subject.

Drs. Ivar Sivertson and H. C. Scheldrup, of Minneapolis, have dissolved partnership; but for the present they remain in the same office, Suite 313-320, Syndicate Building.

In the health reports of forty-five leading cities issued from Washington, St. Paul last month headed the list one week in its low death-rate, which was less than 9 per cent.

The Hennepin County Society holds its annual meeting and election on January 6. Dr. A. S. Hamilton, the retiring president, will read a history of the Society as his presidential address.

Dr. W. J. Marcle, of Minneapolis, who has been doing army work at Ft. Snelling for some months, is now contributing his services for evening examinations of the poor of the city in the tuberculosis dispensary.

Dr. J. F. Plehn, of Minneapolis, chief of staff of the Norwegian Lutheran Deaconess Hospital, has formed a partnership with Dr. H. J. Movius, of Edgerley, N. D., and will move to that city at once.

Dr. F. F. Westbrook, former Dean of the University of Minnesota Medical School, now president of the University of British Columbia, was in Minneapolis last week, and was entertained by members of his former staff.

Dr. Elmer R. Hancock, a graduate of the School of Medicine of the University of North Dakota and of Rush, was married on December 11th to Miss Lydia Peterson, of Rantoul, Illinois. Dr. Hancock is an assistant surgeon in the United States Navy.

Major J. P. Sedgwick, who has been in France for several months doing organization work as a member of the Children's Bureau of the Red Cross, has returned to Minneapolis. Dr. Walter R. Ramsey, of St. Paul, will succeed to Dr. Sedgwick's work, and may be called to France very soon.

The well-known and richly endowed Wilder Charity of St. Paul recommends, in a recent report, that the city health inspectors be given power to close buildings in which gambling and other immoral practices are carried on. Dr. Ohage, the militant and practical health officer of the city, says that would be ideal, but it cannot be done, and he opposes the plan.

The notice appearing in our issue of December 1st, concerning the suspension of vaccination in North Dakota, was based upon incorrect information. Dr. McGurran, secretary of the State Board of Health, announces that the report that vaccines are mixed with dangerous poison is entirely wrong. The vaccination law continues to be rigidly enforced in the state.

Dr. L. B. Baldwin, superintendent of the Hospital of the University of Minnesota, has been commissioned major and will be attached to the Surgeon General's office in Washington. The acting superintendent of the Hospital will be Miss Louise M. Powell, now superintendent of the School of Nurses; and Mr. Albert G. Stasel, the hospital steward, will have charge of the business affairs.

Several changes in the Minnesota State Board of Health and the Advisory Commission of the State Sanatoria for Consumptives have been made by Governor Burnquist. Dr. W. A. Jones, president of the Board of Health, is succeeded by Dr. Geo. Douglas Head, of Minneapolis; Dr. F. N. Hunt, of this Board, is succeeded by his son, Dr. Roscoe Hunt, both of Fairmont; and Dr. C. W. More, of Eveleth, is succeeded by Dr. N. M. Watson, of Red Lake Falls. Dr. H. Longstreet Taylor, of St. Paul, president of the Advisory Commission, is succeeded by Dr. C. W. More, of Eveleth, transferred from the Board of Health.

RECENT TRANSFERS AND ASSIGNMENTS OF NORTHWESTERN MEN IN THE M. R. C.

The following are recent transfers and assignments of Northwestern medical men in the M. R. C.:

Minnesota.—Lieut. Floyd W. Burns, of St. Paul, from St. Louis, Mo., to Camp Beauregard, La.; Lieut. Charles E. Connor, of Minneapolis, to Camp Dodge, Iowa; Lieut. Elmer H. Lutz, of St. Paul, from Fort Snelling to Camp Greene, N. C.; Lieut. Harvey M. Slater, of Minneapolis, to Camp Lewis, Wash.; Lieut. Fred P. Moersch, of Minneapolis, from Ann Arbor, Mich., to Camp Upton, N. Y. (to conduct examinations in mental and nervous diseases); Lieut. Frank J. Elias, of Duluth, to Fort Riley, Kas.; Lieuts. Verne S. Cabot and James N. Dunn, of Minneapolis, to Fort Riley, Kas.; Lieut. Clarence A. Rathbun, of Rice, to Fort Riley, Kas.; Lieut. Stewart H. Anderson, of Wells, to Fort Riley, Kas.; Capt. Martin Larson, of St. Paul, from Fort Snelling to Hoboken, N. J.; Lieut. Gordon M. Clark, of Minneapolis, to the University Base Hospital, Minneapolis; Lieut. Iver F. Selleseth, of Glenwood, to Philadelphia, Pa.

Montana.—Lieut. John J. Tobinski, of Missoula, from Fort Oglethorpe, Ga., to Camp Doniphan, Okla.; Lieut. Robert L. Owens, of Hamil-

ton, from St. Louis, Mo., to Camp Shelby, Miss.; Lieut. Karl A. Snyder, of Great Falls, to Camp Sherman, Ala.; Lieuts. John H. Bridenbach, of Billings, Wm. H. Madden, of Great Falls, and Edward O'Neill, of Kalispel, to Fort Riley, Kas.

North Dakota.—Lieut. George V. Jamieson, of Devils Lake, from Fort Riley Kas., to Camp Beauregard, La.; Capt. William A. Gerrish and Lieut. Adolphus W. Guert, of Jamestown, Lieut. Hugo Mella, of Bismarck, Lieut. John G. Abbott, of Hope, Lieut. Campbell Lansing, of Valley City, and Capt. N. J. Shields, of Wahpeton, to Fort Riley, Kas.; Lieut. W. P. Baldwin, of Cas-
selton, from Fort Riley, Kas., to Vancouver, Oregon; Lieut. J. H. Plant, of Montpelier, from Fort Riley, Kas., to Camp Lewis, Wash.; Lieut. W. L. Barbour, of Deering, from Fort Riley, Kas., to Washington University, St. Louis, Mo.

South Dakota.—Lieut. Willard A. Bates, of Northville, from Fort Oglethorpe, Ga., to Camp Travis, Texas; Lieut. William E. M. Devers, of Mitchell, to Fort Riley, Kas.; Lieut. George H. Richard, of Clear Lake, S. D., has been honorably discharge from service at Fort Oglethorpe, Ga., and ordered home.

MEDICAL BOOKS FOR SALE

New and used medical books for sale. Bargains. Write for our list. The Isca Co., Booksellers, Minneapolis, Minn.

LOCATION DESIRED

A physician and surgeon, also registered pharmacist, desires a location in a fairly large town or city. Address 102, care of this office.

PRACTICE FOR SALE

A \$7,000 medical and surgical practice in Minneapolis for sale at a nominal price. Must sell at once, as I am leaving the city. Office in one of the best buildings in the city. Address 101, care of this office.

AUTOMOBILE COUPE BODY FOR SALE

I will sell for \$75.00 a made-to-order coupe body, complete with lamps, seat covers, etc., in excellent condition. Suitable for chassis 112-inch to 124-inch wheelbase. Address W. 802 Donaldson Bldg., Minneapolis. N. W. Phone, Main 1815.

POSITION WANTED

A graduate of an A-1 school, having completed internship at the Minneapolis City Hospital, desires a position with a Twin City physician. Has had 18 months' experience as assistant city physician. Scandinavian. Address 103, care of this office.

PRACTICE FOR SALE

Good practice in live town of 1,200 near Twin Cities. Every modern convenience. Good country. Collections A-1. Good office equipment cheap. Real estate optional. Address 605, care of this office.

PRACTICE FOR SALE

Office fixtures and drugs amounting to \$500, and with them a \$5,000 annual general and surgical practice. I am ready to give immediate possession or will stay if necessary until I am called for active duty. Have commission in U. S. R. Address Dr. A. W. Swedenburg, Gully, Minn.

OFFICE FOR RENT

Over ten per cent of the physicians of Minneapolis have been called to war. This has left many vacant offices, many of them in central locations, making an opportunity for physicians and dentists in outside locations to come to the center. The Pillsbury building, Sixth and Nicollet, is in the heart of Minneapolis, and offers some excellent space in single, double, or en suite.

SANITARIUM FOR SALE

Excellent lake shore sanitarium site with a fifteen room main building and seven cottages, together with all other necessary outbuildings, beautifully situated on 70 acres of wooded land. Located in the heart of the pines, within convenient distance of the Twin Cities, and close to railway station and town. Splendid macadamized road to property. Will make a very interesting proposition of sale or exchange on this property. Ask for Mr. W. E. Wakeman, Thorpe Bros., 206 Andrus Building, Minneapolis, Minn.

PRACTICE FOR SALE

A \$10,000 practice in a live Southern Minnesota city, both surgical and general. The city is noted for its excellent roads, schools, factories, residences, streets, and its water, sewer, gas, electric, and heating plants—an open hospital. On three main line railways. Reason for selling: specializing with an established specialist in a larger center. Will sell for invoice price of equipment; real estate optional. In answering give age, school, practice, etc. Address 613 care of this office.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-first annual session, opened Sept. 24, 1917, and closes June 8, 1918. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters this session. For further information address Charles Chassaing, M. D., Dean, New Orleans Polyclinic, post-office drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

In the Treatment of

RHEUMATIC and NEURALGIC ILLS

you will obtain substantial aid from the thorough use of

K-Y ANALGESIC

This non-greasy, water-soluble local anodyne will enable you to ease your patient's pain and discomfort, while your internal or systemic medication is combating the cause of his condition.

The advantages, moreover, of relieving the pain of a facial neuralgia, an inflamed joint, or aching lumbar muscles without recourse to coal tar derivatives cannot fail to appeal to medical men.

K-Y ANALGESIC is a safe and effective adjunct that will daily grow more useful to the practitioner as the many opportunities for its effective use are realized.

VAN HORN AND SAWTELL

NEW YORK CITY, U. S. A.
15 and 17 East 40th Street

and

LONDON, ENGLAND
31 and 33 High Holborn

So many cases of

Pruritus, Chafings, and Irritations

are relieved by applying

K-Y Lubricating Jelly

that we feel we owe it to our patrons to direct their attention to the usefulness of this product as a local application, *as well as* for surgical lubrication.

No claim is made that K-Y Lubricating Jelly will act with equal efficiency in every case; but you will secure such excellent results in the majority of instances that we believe you will continue its use as a matter of course.

NO GREASE TO SOIL THE CLOTHING!

Collapsible tubes, 25c. Samples on request.

VAN HORN AND SAWTELL
15-17 East 40th Street, New York City

WHEN AN INFANT OR CHILD IS OBSTI- NATELY CONSTIPATED

relief can be obtained — safely
and harmlessly — by giving

INTEROL

This softens the feces, prevents them from getting dry and hard and by providing the lubrication necessary for their easy passage, assures free and natural evacuation.

Moreover, **INTEROL** protects the intestinal mucous membrane against abrasion, and enables the child's bowels to move without the enervation, irritation, griping, straining, or after-constipation common to the drastic cathartics like castor oil.

Sig— $\bar{5}$ \dagger morning and night on an empty stomach, the dose to be reduced or increased, as indicated.

In pint bottles at all druggists. INTEROL booklet on request; also literature on "Obstinate Constipation of Infants and Young Children"

VAN HORN AND SAWTELL
15 and 17 East 40th Street, New York City

Minneapolis Clinical Laboratory

Oldest in the Northwest

N. W. Nic. 3690 410 Syndicate Bldg. T. S. 33 117

We make Auto vaccines from discharges
or the blood

Wassermann Test - - - \$5.00

Serum Test for Gonorrhea, \$5.00

Serum Test for Tuberculosis, \$5.00

HENRY L. ULRICH, M.D., Director

Private Maternity Home

For Women before and during
Confinement.

Infants cared for. Physicians and Nurses in
attendance.

Good References Given.

MRS. J. W. MOREY

2014 26th Ave. So.,

MINNEAPOLIS, MINN.

Use Vaccines in Acute Infections

The early administration of Sherman's Bacterial Vaccines will reduce the average course of acute infections like Pneumonia, Broncho-pneumonia, Sepsis, Erysipelas, Mastoiditis, Rheumatic Fever, Colds, Bronchitis, etc., to less than one-third the usual course of such infectious diseases, with a proportionate reduction of the mortality rate.

Sherman's Bacterial Vaccines are prepared in our specially constructed Laboratories, devoted exclusively to the manufacture of these preparations and are marketed in standardized suspensions.

Write for Literature.



G.H. SHERMAN, M.D.
Detroit, Mich.
U.S.A.

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY
AND PROMPTNESS ARE OUR
CHIEF AIMS. Send to our nearest
laboratory for fee list and containers
with instructions for collecting all
specimens. These containers will be
sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses
of tissues removed at operation should be part
of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and
aerobically and isolate the offending organ-
isms. Pipettes for collecting material for auto-
genous vaccines sent upon request.

Wassermann Test, Blood or

Spinal Fluid \$5.00

We do the classical test. Any of the various
modifications will be made upon request without
additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

PUBLISHER'S DEPARTMENT

A MANUAL FOR THE TREATMENT OF VENEREAL DISEASES.

The Surgeon General's Office recently published in the *Journal of the A. M. A.* an outline of the management of venereal diseases. This outline was intended for the medical officers of the Army, and, of course, it is an authoritative production. The National Pathological Laboratories, Inc., of Chicago, have put the matter, with the consent of the American Medical Association, in an attractive form for free distribution. It makes a pamphlet of 100 pages, 4x6 in size, and is bound in limp cloth. This is a highly worthy act, and every medical man will be pleased to have a copy in so convenient a form.

AMERICAN-MADE SALVARSAN

The H. A. Metz Laboratories, Inc., of New York, are now making Salvarsan in this country under the exact process by which it has always been made, since its discovery, in Hoechst, Germany, where Ehrlich discovered it. Unless made without the slightest irregularity, its toxic by-products may do real injury and will certainly materially affect its value.

The price has been fixed by the manufacturers, and is very moderate.

Any information desired will be cheerfully furnished by the H. A. Metz Laboratories, 122 Hudson St., N. Y. City.

PHYSICIANS' COLLECTION AND CREDITS

The Mercantile Collection Agency, Inc., with offices in the New York Life Building, Minneapolis, and also in Seattle and Portland, is an agency for preventing the wholesale swindling of physicians by a class of men who never expect to pay a physician's bill, and it is also an agency for the collection of bills that require the attention of an expert in collecting physicians' accounts.

We believe the agency will give physicians the best of service and perfect satisfaction.

THE MOOR (MUD) BATHS

Waukesha, Wis., is famous for its mineral waters, and now its Moor (Mud) Baths are so well and favorably known that the company giving them has built a large modern fire-proof building which is open the year round, and the grounds are so spacious that they furnish room for an excellent nine-hole golf course, besides tennis courts and other recreations.

These baths furnish almost immediate and not infrequently permanent relief in the various forms of rheumatism, in neuritis, and in gall-bladder and liver troubles.

The treatment gives effective and natural elimination, improves the circulation, and gives a patient relaxation and rest, all of which means rapid restoration to the normal healthful condition without the possibility of any untoward effects.

HEPCO FLOUR

The Waukesha Health Products Company, of Waukesha, Wis., manufactures Hepco Flour, and they claim it to contain less than one per cent starch, and rich in protein and fat. Granting these statements to be true,—and the food laws now make the penalties for false claims of this character very severe—we say granting the claims to be true, every physician must know the value to diabetic patients of the various forms of bread made with this flour, which is also said to be very appetizing.

The different forms of bread made with Hepco Flour are also of special value in all forms of starchy indigestion, which is a more common ailment than is generally supposed.

SILVOL: A USEFUL GERMICIDE

The signal property of Silvol is its germicidal and non-irritating effect on inflamed and infected mucous membranes. This notable proteid-silver compound contains approximately 20 per cent of metallic silver; is non-toxic; is freely soluble in water; and its solutions do not require filtration. It does not coagulate albumin, and it is not precipitated by proteids or alkalis. It stains less than other proteid-silver combinations.

Silvol may be used in the treatment of infected and inflamed mucous membranes in strengths ranging from 2 to 50 per cent. It has been suggested that the addition of a small proportion of glycerin solutions will "hold" the Silvol to the spot.

Silvol has been successfully used in the treatment of nasal and pharyngeal inflammations, both acute and chronic. One practitioner reports his experience with a 20-per-cent solution of Silvol in over five hundred cases of various nasal, laryngeal and ear diseases.

An eastern specialist reports gratifying success with Silvol in the treatment of twenty-five cases of antral infection. The treatment consisted in first irrigating the sinus with normal salt solution, then injecting it as nearly full as possible with a 10-per-cent solution of Silvol, repeating daily. Usually the cases cleared up in less than a week, often within three or four days. Another writer observed most striking results in tracheitis and bronchial asthma. In these cases a 10-per-cent solution was applied twice a week.

A prominent urologist reports the successful use of Silvol in one hundred cases of posterior urethritis, gonorrheal in origin. A well-known ophthalmologist says: "My clinical observations of Silvol evidenced to me that in all forms of acute conjunctivitis, acute epidemic to acute gonorrheal, this product is a powerful bactericide, apparently absolutely non-irritating; even in a solution of 50 per cent used as frequently as every fifteen minutes, day and night, for a period of three days."

An experienced surgeon makes the assertion that Silvol is a better application in ophthalmia of the newborn than silver-nitrate. It can be used with less risk and the writer thinks he can control any case with it.

Silvol is supplied in the following forms: ounce bottles; six-grain capsules, bottles of fifty; vaginal suppositories of Silvol, 5 per cent, boxes of one dozen; Silvol Ointment, 5 per cent, collapsible long-nozzled tubes, two sizes; Silvol bougies, 5 per cent, boxes of 25 and 100.

NEUTRAL SODIUM SOAP

For some time Dr. Alexis Carrel has been using, in the War Demonstration Hospital of the Rockefeller Institute, for the cleansing of wounds a liquid sodium soap—a neutral sodium oleate. This has been employed with most satisfactory results.

This soap is used to scrub out an infected wound. A little of it is applied to a pledget of cotton, held with a dressing forceps, and the wound scrubbed with it, more soap being applied to the cotton from time to time until there is a good lather. The wound is scrubbed in this way from the center to the periphery, the soap finally being washed away with water, after which the indicated antiseptic is applied, as, for instance, Chlorazene Surgical Cream.

Neutral Sodium Soap, prepared to meet Doctor Carrel's indications, has been placed on the market by the Abbott Laboratories, Chicago, and is now offered to the medical profession.

This firm is also prepared to supply Chlorcosane, the new simple solvent for Dichloramine-T, recently introduced by Drs. Dakin and Dunham. This is free from taste or odor, and is non-irritant, making a solution which is more stable than has heretofore been obtainable, and requiring no admixture or dilution with other substances.

AMPOULES MUCH IN FAVOR

The convenience of the ampoule commends itself to the medical profession and more and more of them are being used with entire satisfaction.

As practitioners make use of sterile solutions in this form and become convinced of the possibilities in ampoule medication there is an ever increasing demand on the pharmaceutical houses to enlarge the extent of the formulas.

Eli Lilly & Company reports that the demand for ampoule formulas has been increasing to such an extent that it was necessary to greatly enlarge its facilities and also to add to its already long list of formulas. This house has, today, the reputation of offering the most comprehensive line of ampoules produced in this country and already is known, quite apart from its fine reputation as a pharmaceutical and biological concern as THE Ampoule house.

A SOUND INVESTMENT

The Minneapolis General Electric Company is selling a preferred stock that pays quarterly dividends, and has behind it an equipment and a field that place it in the first rank of industrial stocks. Government bonds, and especially war bonds, are, of course, the best bonds in the world; but one wants with them a few industrials because of their high earnings and excellent dividends. A stock based upon a water-power plant in a big and constantly growing field wherein electricity finds innumerable users, is surely a safe stock, and such a plant grows so rapidly that the security, a mortgage, of course, rapidly increases.

Doctors may well put a part of their earnings in such a stock as that of the Minneapolis General Electric Co.

THE LUER MODEL SYRINGE

The Frank S. Betz Company has put upon the market a high-grade glass syringe at the remarkably low price of \$1.00.

This syringe is made with a solid glass plunger, carefully ground to make it an exact fit and thus avoid leakage. The gradations are accurate and plainly marked, thus insuring an exact dose.

This syringe is put up in a pocket case of good quality, and the outfit is one that pleases all who purchase it.

Betz says of it: "Price attractively low; quality uniformly high."

WALDHEIM PARK

The management of Waldheim Park, the old and well-known sanatorium at Oconomowoc, Wis., has made a new departure in the form of a modern hospital with a polyclinic where all the modern modes of diagnosis can be carried out to the fullest and minutest extent. Here the patient is studied until his case is mastered, until he can be put on the road, where possible, to a perfect recovery because his condition and the cause of his departure from normal have been thoroughly mastered.

Such treatment is especially to be commended in nervous and mental cases whose underlying causes must be discovered and dealt with if perfect and permanent recovery are to be hoped for and attained.

The Director of Waldheim Park will be pleased to correspond with physicians who desire to know more about the institution's work. For any information desired, address Dr. J. H. Voje, Oconomowoc, Wis.



ENTRANCE
ESTABLISHED
IN 1884

WEST HOUSE

OFFICE & BATH HOUSE

PSYCHOPATHIC HOSP.

GYMNASIUM
WAUWATOSA,
WISCONSIN

THE MILWAUKEE SANITARIUM

FOR MENTAL AND NERVOUS DISEASES

Located at Wauwatosa (a suburb of Milwaukee) on C. M. & St. P. Ry., 2 1/2 hours from Chicago, 15 minutes from Milwaukee, 5 minutes from all cars. Two lines street cars. Complete facilities and equipment, as heretofore announced.—Psychopathic Hospital: Continuous baths, fireproof building, separate grounds.—West house: Rooms en suite with private baths.—Gymnasium and recreation building: Physical culture, "Zander" machines, shower baths.—Modern Bath House: Hydrotherapy, Electrotherapy, Mechanotherapy, —30 acres beautiful hill, forest and lawn. Five houses. Individual treatment. Descriptive booklet will be sent upon application.

RICHARD DEWEY, A.M., M.D.

EUGENE CHANEY, A.M., M.D.

WILLIAM T. KRADWELL, M.D.

CHICAGO OFFICE: Marshall Field Annex, 25 E. Washington Street, Room 1823, Wednesdays 1 to 3 P. M., (except in July and August) Telephone Central 1162.
MILWAUKEE OFFICE: Goldsmith Building, Room 604, Consultation by appointment. Telephone Main 81.
TELEPHONE SANITARIUM OFFICE: Milwaukee - Wauwatosa 16.

THE JOURNAL-~~L~~ANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, JANUARY 15, 1918

No. 2

ORTHOSTATIC-LORDOTIC ALBUMINURIA, WITH REPORT OF A CASE

BY GEORGE E. BROWN, M. D.

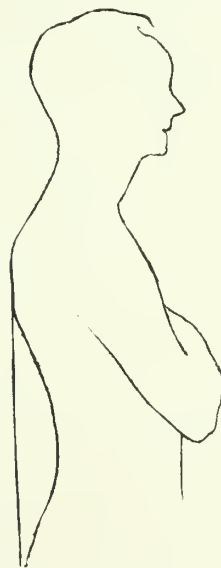
MILES CITY, MONTANA

Lordotic albuminuria, also called *orthostatic*, *postural*, and *cyclical* albuminuria, was first recognized by Pavy in 1885. He observed cases of intermittent albuminuria, and, though not recognizing the importance of posture as an etiological factor, he did associate this condition with activity and fatigue. He termed this condition *cyclical* albuminuria. Stirling, in 1887, demonstrated the relation of posture in certain forms of albuminuria, emphasizing the direct relation of the upright position and the presence of albumin in the urine.

The most important work done on this subject has been accomplished by Jehle, who advocated the theory that, in this group of cases, a marked form of lumbar lordosis is present, and the association of albuminuria and lordosis is a direct one (he termed the condition *lordotic* albuminuria). Jehle's views, no doubt, explain a large number of these cases, but there are other cases of this type which depend on fatigue and other unknown factors. Nicholson reports, in a study of 159 healthy boys, that 7.5 per cent showed albumin in the first morning urine; 7 per cent, after breakfast; 10.7 per cent, after playing football; and 18 per cent, after a three-mile run.

The prognosis in these albuminuria cases is of vital importance. Do they subsequently develop a true nephritis, or does the albumin disappear after adolescence is passed, when the abnormal lumbar lordosis is usually corrected by increase

in weight or changes in the spinal curves due to occupation, increasing age, etc.? Unfortunately, a satisfactory answer to this query is difficult to give. Jehle, in his writings on the subject, states



Tracing from photograph showing marked lumbar lordosis.

a good prognosis may be given if the curvature is amenable to treatment. Elsner states that these cases should be regarded as mild nephritics as long as the albuminuria persists, but the treatment should in no way interfere with their usual activities or occupation.

Senator believes there is a close relationship between these forms of albuminuria and true nephritis. Huelmer, on the contrary, thinks a constitutional weakness of the kidney-filter is present which has no relation to nephritis.

In summing up the prognosis of orthostatic-lordotic albuminuria, a wise course to pursue is to regard these cases as possible nephritics, and keep them under observation for a number of years.

CASE.—C. B., aged 23, single, male, machinist. Comes for examination of urine.

Family history, negative.

Personal history: No history of scarlet fever, tonsillitis. One year ago had a moderately severe attack of typhoid fever, and was in bed thirty days; no complications.

P. T.: Patient made application for the aviation service. Albumin was discovered in the urine in the

Spine: marked lumbar lordosis, as shown in photographic tracing.

Extremities: no evidence of edema.

SPECIAL EXAMINATIONS

Blood: hemoglobin, 90 per cent Talquist.

Blood-pressure: 130 systolic; 75 diastolic.

Blood urea: 17 mg. per 100 c.c. of blood.

Urine findings: as shown in chart.

This case is a clear example of lordotic albuminuria, or perhaps the term *orthostatic-lordotic albuminuria* would be more correct. The fact that reproducing the lordosis by placing a pillow under the spine causes an albuminuria shows that factors other than the upright position enter into the causation of this condition. We endeavored to make the urine albumin-free by having the patient stand in a position of lumbar kyphosis. This caused a great diminution of albumin in the urine, but a trace remained.

RESULTS OF URINARY TESTS

Specimen	Sp. Gr	Albumin	Sediment Phenolphthalein
First urine passed on arising	1030	Heller's Heat and Nitric Ferr. and Nitric	Negative Negative Negative No Casts
End of 24 hours	1021	Heller's—strong Heat and Nitric—strong	Positive Positive No Casts
End of 2 hours— Absolute rest		All tests	Negative 35% 2 hrs.
End of 2 hours— Average exercise		Heller's—strong Heat and Nitric	Positive $\frac{1}{10}$ Vol. No Casts 52% 2 hrs.
End of 1 hour—Absolute rest. Pillow under lumbar spine.		Heller's Heat and Nitric	Heavy ring $\frac{1}{12}$ Vol.
End of $\frac{1}{2}$ hour— Natural lordosis		Heller's Heat and Nitric	Heavy ring $\frac{1}{10}$ Vol.
Standing			
End of $\frac{1}{2}$ hour— Stooped position		Heller's Heat and Nitric	Faint ring Moderate trace
Standing			

course of a routine examination. Three examinations were made, and albumin was present in large traces each time. He was advised to have his adenoids and tonsils removed. The patient then returned to Miles City, and Dr. Hempstead removed his tonsils, which were of the small buried type, and showed distinct pathology. The patient's urine was examined, and a heavy trace of albumin found. A morning specimen was requested, and this was found albumin-free on several occasions, but his diurnal specimens showed varying amounts of albumin. A lordotic albuminuria was suspected, and a series of tests was made which bore out this assumption.

Examination: Tall, spare youth; height, 5 feet 11 inches. Weight, 150 lbs.; flat chested; acute costal angle. Head, Negative.

Chest: Dropped heart 3.5 cm to right, 9 cm to left; apex in 5 L. C. S.; sounds, normal; 2d aortic not accentuated.

Abdomen: lower pole of right kidney palpable and movable.

I cannot explain the phenolphthalein findings, for I see no reason for any marked variations in the dye-excretion, regardless of position. Barker and Smith, in a series of six cases of postural albuminuria, found a normal dye-excretion, with no marked variation in the upright and the reclining position. We found the blood urea to be within normal limits.

CONCLUSIONS

1. Lordotic-orthostatic albuminuria is not rare, and its diagnosis is of the greatest importance.

2. Every case of albuminuria in young adults should be examined, to prove the existence or non-existence of this type of albuminuria.

3. Albumin in the day urine with its absence

in an early morning sample is suspicious. Similar constant findings are diagnostic.

4. Casts are rare findings.

5. No dietetic treatment is necessary. Correction of the lordosis if possible and prolonged

observation of the patient cover the necessary treatment.

REFERENCES

A complete bibliography is given in The Medical Clinic of North America in the article by Dr. Theo. Janeway on "Postural Albuminuria."

PENETRATING INJURIES OF THE EYE-BALL

By G. GOLSETH, B. S., M. D.

JAMESTOWN, NORTH DAKOTA

Penetrating injuries of the eyeball can be classified to advantage, into two classes: first, those in which the foreign body is not retained in the eyeball; and, second, those in which the penetrating injury is complicated by retention of the foreign body.

The foreign bodies which, most commonly, cause the injuries of the first class are shots, nails, knife-blades, etc.; and to the second class belong splinters of iron or steel, fragments of brass or lead, and pieces of glass or stone.

The retained foreign bodies are classified as magnetizable, such as steel and iron; and non-magnetizable, such as lead, glass, copper, and wood.

From a clinical standpoint it is of the greatest importance to determine whether or not an injury is complicated by the retention of a foreign body, because an injury with a retained foreign body is peculiarly liable to be followed by a sympathetic inflammation. Also when a foreign body is present it should be removed at the earliest possible moment.

Diagnosis.—In some cases we can recognize at first glance a perforation of the eyeball, and determine the presence of a foreign body; but in other cases it may be difficult, if not impossible, to find the cicatrix. If the media are clear, the ophthalmoscopic examination may locate the foreign body in the vitreous or retina; but if cloudy we must rely on the Röntgen rays for a diagnosis.

By means of Sweet's or Dixon's localizer we can obtain very good results, providing we are thoroughly familiar with the use of such a device.

I have found the following method quite accurate: After instilling cocaine into the conjunctival sac, a small lead bead is sutured to the conjunctiva, close to the outer and inner sides of

the cornea and on the level with the pupil. These beads will always appear in their relative positions in the skiagraph. The patient is instructed to keep the eyes open when the anterior posterior exposure is taken, and to look straight forward when the lateral exposure is made. These two views give the depth, as well as the horizontal and vertical position, of the foreign body.

Treatment.—The treatment of penetrating injuries not complicated with a retained foreign body, consists, first, in instilling a few drops of a 4 per cent cocaine solution into the conjunctival sac, and a thorough examination of the whole eye. If pus can be expressed from the lachrymal sac, the sac should be removed and the puncta cauterized with the actual cautery. The conjunctival sac should be thoroughly irrigated with some antiseptic solution; and I have found none better than a (1-5,000) solution of the cyanide or the iodide of mercury.

If the iris has prolapsed, and the case is seen within forty-eight hours, it should be excised, and the edges of the coloboma put in proper position. If the wound in the cornea is large it should be covered with a conjunctival flap. If the wound in the cornea is small, and near the periphery, eserine should be instilled, and an attempt made to secure a round pupil. If the wound is in the central part, atropine should be used, and a conjunctival flap is necessary, because atropine has no effect on the iris until the anterior chamber is restored.

If the case is seen after forty-eight hours, or when the wound in the cornea is large (one quarter of its diameter) all that can be done in a large percentage of the cases is to trim off the iris, carefully Pasteurize the wound, and apply a Kuhnt flap. If the scar does not appear firm, it should first be Pasteurized, and the iris separated from the wound, pulled out, excised, and a conjunctival flap applied. The actual cautery is very effective for trimming off an old iris prolapse, but its use may lead to a sympathetic inflammation.

*Read at the thirtieth annual meeting of the North Dakota State Medical Association at New Rockford, May 29 and 30, 1917.

Where an extensive synechia is left, an iridectomy should be performed on the opposite side before the patient leaves the hospital, so as to prevent an increase in the tension and the formation of a staphyloma. Where the Kuhnt flap is used it is possible to excise an extensive prolapse, and thus protect the eye from a large synechia with its resulting complications. In such a case both eyes must be bandaged and kept closed for at least three days, with a change of dressing every day. It is good practice to make a subconjunctival injection of mercury cyanide in all cases, and is especially important where the foreign body has penetrated deeply into the eyeball. If tetanus is suspected, antitetanic serum should be given at once.

Treatment of a penetrating injury with retention of the foreign body is the same as has been outlined for penetrating injuries not complicated by retention of the foreign body, plus the removal of the foreign body.

There is scarcely anything which taxes a person's ingenuity so much as the use of the giant magnet. When the body is in the anterior chamber, iris, lens space, or lens, by applying the magnet to the anterior surface of the cornea, it can be removed through the wound or through an incision near the periphery of the cornea. If the magnetizable body is located in the vitreous chamber, it becomes much more difficult. Haab recommends to pull the particle until it strikes the posterior surface of the lens, then around the lens, through the suspensory ligament up behind the iris, through the pupil, and into the anterior chamber. The objection to this method is the wounding of the lens, damage to the suspensory ligament, and possible entanglement of the ciliary body. Where no damage is done to the lens, the following method is more suitable: Make a triangular conjunctival flap between the recti muscles in that anterior quadrant of the eye nearest the foreign body; then a meridional incision is made in the sclera one centimeter from the cornea and about one-half centimeter in length; the point of the magnet is applied to the wound, and the current turned on gradually. After the body has been removed the conjunctival flap is sutured in place. The patient must be kept in bed for a number of days in order to guard against detachment of the retina.

When the foreign body is not magnetizable and is in the anterior chamber, we can quite readily remove it by incising the cornea and using a fine pair of forceps. If imbedded in the iris, an iridectomy will be necessary. If the

body is in the vitreous we have to make an incision through the sclera, and attempt to catch it with forceps. When the media are clear it is of great assistance to dilate the pupil and light up the vitreous space with Klaar headlight.

The following cases show what is required in the treatment of penetrating injuries of the eyeball.

CASE 1.—J. B., while at work hewing a plank, was struck in the right eye by a splinter of wood. He consulted the home physician, who tried to remove the splinter; but broke it off even with the cornea.

The patient consulted me, and the examination revealed a splinter of wood which had penetrated the cornea, a little to the nasal side of the pupil, and the end of it was lodged in the iris. After separating the splinter from the corneal wound and flattening the cornea, I was able to catch the splinter with a small ear forceps, and extract it without any further trouble. The healing was uneventful, and vision normal.

CASE 2.—L. H. six days ago while chiseling, suddenly felt something strike his eye, but, as there was very little pain, he waited for six days before he consulted me. Examination showed a marked ciliary injection, a small cicatrix near the center of the cornea, and a traumatic cataract.

When the magnet was applied to the anterior surface of the cornea, pain was experienced by the patient. The full current was used, but with no result. Then a conjunctival flap was made in the outer lower quadrant, the sclera incised, and the magnet applied to the wound, but unsuccessfully. After enucleation I found a small piece of steel imbedded in the sclera close to the optic nerve.

CASE 3.—J. F., two weeks ago, while hammering on some part of a steam-engine, felt something strike his right eye. He consulted a physician, who told him, "I removed it all right." But once in a while his eye would blur. On examination I found a small scar in the upper outer surface of the cornea and a small slit in the iris. The media were clear. On applying the magnet the piece was pulled through the original wound in the iris and into the anterior chamber. It was removed through a small incision in the periphery of the cornea. Vision, 20/20.

CASE 4.—A. R., one hour ago, he placed a 22 cartridge on an anvil, and hit it with a hammer with the result that a splinter penetrated his right eye. The examination showed a wound in the upper nasal side of cornea, a wound in the iris, and a traumatic cataract. The skiagraph revealed a foreign body, 2 by 1.5 mm., in the outer lower and posterior part of the vitreous. After making an incision in the sclera I tried to remove it with forceps, but was unsuccessful. I tried again on the following day, but with no better result, so the eye was removed. There was already present considerable pus around the foreign body.

CASE 5.—H. J., six hours ago, while chiseling, a piece of iron struck him in the left eye. On examination I found a large wound in the outer central part of the cornea, a wound in the iris, and a traumatic cataract.

I applied the magnet to the corneal wound, and immediately noticed bulging of the iris; I therefore made an iridectomy, and extracted a piece of steel 2 by 4 mm.

The lens was absorbed, but with the correcting lens 20/20, vision was obtained.

CASE 6.—L. A., three weeks ago, fired off a 22 rifle while another boy held a stone at the muzzle of the barrel. He noticed that something struck his eye. He was taken to a physician, who treated him for inflammation of the eye. On examination I was unable to find a cicatrix, the lens was cloudy, and there was a very extensive iridocyclitis present. The Röntgen rays showed a small particle located in the suspensory ligament or in the ciliary body. As the particle was non-magnetic and very small I made no attempt to remove it; but put the patient to bed, and made subconjunctival injections of cyanide of mercury. In a couple of weeks the inflammation had nearly subsided; the media cleared up somewhat, and is still clearing.

CONCLUSIONS

1. Penetrating injuries of the eyeball should have immediate attention.
2. The correct diagnosis is of the greatest importance.
3. Infection is the worst enemy we have to battle against.
4. Penetrating injuries of the eyeball require the most skillful surgery in ophthalmology.

DISCUSSION

DR. ARCHIE D. McCANNEL (Minot, N. D.): I congratulate Dr. Golseth on bringing this matter before the Association. Just two things have occurred to me. The first, the radiograph and localization in these cases. I can recall two cases where a piece of steel had perforated an eye causing a wound in the iris. It indicated that the steel was in the eyeball, but by localizing with the radiograph it showed it had passed through the eyeball, and was lodged in the fat of the orbit. In both cases the eye showed practically no reaction, and both quieted down with very little injury to the eye.

The other is the large number of injuries among the

farmers, caused by a piece of steel injuring the eye while sharpening plow-shares by a chipping edge. I have had over twenty eyes that have been injured in this way, and I think this class of workmen should be advised against this very dangerous method.

DR. HYSLIN: I would like to ask Dr. Golseth to what extent one is justified in making a search for a piece of glass from a large perforated wound. I had a case or two with large wounds about an eighth of an inch long. The iris was cut, and protruding from the wound. I could see no glass, and, not being an eye specialist, I did not know whether I did my full duty. I succeeded in replacing the iris very well, and I want to ask if one is justified in making a mechanical search for something he cannot see.

DR. J. F. BRECKLE (Kulm, N. D.): I had a case where a boy standing below the hay-barn had a pitchfork dropped on him, and one of the tines entered the cornea and passed through the lower segment of the iris, and must have passed through the sclera and struck the floor of the orbit. The fork then fell forward, and fell away. I treated the wound with cold water and boric acid compresses. I saw there was very much injury to the eye, and there was nothing more that I could do. It was twenty-four hours before he could catch the train to get to a specialist, and by that time he felt so much better he went home. I saw him two or three days later, and there was a bulging of the injury in the cornea, but there seemed to be no inflammation. His vision has almost entirely returned, and the eye has healed up without any further treatment.

DR. GOLSETH (closing): In regard to what Dr. Breckle has said: I would want to know what structures were involved in that injury. Of course nature will do a wonderful thing, but, as I said, infection is the thing we have to worry about.

In regard to Dr. Hyslin's question: I think it is advisable not to try to remove a foreign body before it is localized with the *x*-ray or with the ophthalmoscope, and this is particularly true in the case of glass. I have had quite a number of cases with glass left in the eye which caused very little trouble.

PITUITARY EXTRACT*

BY G. T. NORDIN, B. S., M. D.
House Surgeon, Swedish Hospital
MINNEAPOLIS

HISTORY

Vesalius¹ was the first to describe the pituitary gland (1553). In his "*De Corporis Humani Fabrica*" he calls it the *glans pituitam excipiens*, due to his mistaken idea that it secreted the nasal mucus. Sommering² (1778) described it more fully and called it *hypophysis cerebri*. Both of these thought it to be a secreting gland although they could find no ducts. Rathka (1838) pointed out that the anterior part of the gland was derived from the buccal endoderm, while the posterior and intermediary portions were derived from

the nervous ectoderm (that part which goes to form the floor of the third ventricle). This was disputed for some time until in 1874 Mihalkovichs proved conclusively that it was so.

The physiology of the pituitary gland has been much neglected, and it is only recently that its physiological action has been studied. Up to 1886 it was considered as functionless, but Marie noticed that it underwent marked changes in cases of acromegaly, and speculations as to its function began. In 1895 Schaefer and Oliver³ found that, if they injected a saline extract of the gland, the blood-pressure would rise. This was

*Read before the Swedish Hospital Staff at its quarterly meeting October 8, 1917.

confirmed by Howell¹ a few years later. In 1899 Schaefer and Vincent² found two distinct substances in the gland, one pressor substance soluble in normal salt solution, but insoluble in absolute alcohol and ether, which increased the blood-pressure; another depressor substance, soluble in all three, which decreased the blood-pressure. In 1909 Falta and Ivovic³ showed that the pressor substance came from the posterior and intermediary portion of the gland, while the depressor substance came from the anterior portion. Shamoff,⁷ a Russian physiologist, maintains that he has isolated a substance identical with adrenalin from the posterior lobe of the hypophysis. Dale,⁸ in 1909, showed that the effect of the posterior pituitary extract was entirely due to its direct stimulating effect on smooth muscle independent of the latter's nerve supply. In 1910 Ott and Scott,⁹ as well as a good many others, discovered that the mammary secretion was increased by the administration of pituitary extract, but this was later found to be only a temporary increase due to the contraction of the smooth muscle capsule of the gland alveoli. It has been claimed by many men that the extract produces increase in secretion of urine and increase in secretion of spinal fluid, but both of these have been proven to be purely circulatory changes.

PREPARATION AND STANDARDIZATION

Fresh glands are taken from slaughtered cattle. The posterior lobe and the intermediary substance of the glands are cut away from the anterior lobe. These are very finely minced, defatted, and then the tissue juices extracted with acidulated water. The extract is then heated to boiling to remove any and all coagulable protein (peptones and other proteins are removed by chemical precipitation). At first these extracts were made so that 1 c.c. of the same corresponded to 1 gram of the dried gland. Under this form of standardization many accidents occurred, on account of too large doses and many inactive ampules being sent out. In 1914 G. B. Roth¹⁰ devised a means for testing the strength of this fluid extract. He found that beta-aminazol-ethylamine hydrochloride had exactly the same action on the uterus as that of the pituitary extract, only in a very much higher degree. After a series of experiments he finally adopted 1 to 20,000,000 dilution of the pure drug as a standard. He then diluted or concentrated the fluid extract of the gland so that 1 to 10,000 or 1 to 20,000 of the same produced the same strength of contraction on an isolated guinea-pig uterus as

the standard solution. The solution is now put in 1 c.c. ampules, which are hermetically sealed and sterilized by heat. Parke, Davis & Co., Burroughs and Welcome, and Mulford use, in addition to heat, a preservative, while Armour uses no preservative at all. In regard to strength of extract Schwarz¹¹ and Shamoff maintain that the Parke, Davis & Co. pituitrin is weaker than other preparations. This is only partly so: Parke, Davis & Co. put out 2 strengths—pituitrin (S), full strength; and pituitrin (O), half strength, the former for use in surgical cases and the latter in obstetrics. This sometimes leads to confusion, and sometimes bad results, because you can well imagine what would happen in obstetrics if 1 c.c. of pituitrin (S), instead of pituitrin (O), were given.

THERAPY

There is hardly a condition or disease for which pituitrin has not been suggested and used, from a common cold to insanity. I am not prepared to discuss more than a very small number of these because there are too many of them and some are too far-fetched. Dr. P. W. Goddie¹² claims that he has been very successful in stopping pulmonary hemorrhage by administering small doses of pituitrin (0.5 c.c.). He does not, however, say what the underlying condition of the hemorrhages was. Citelli,¹³ nose and throat specialist, uses pituitrin in 1 c.c. doses, fifteen minutes before operation, as a preventive against nasal or pharyngeal hemorrhage, and he claims very good results.

The most interesting phase of pituitrin therapy aside from obstetrics, however, is that of its use in post-operative conditions and especially so when the abdomen has been invaded. Even the slightest operation where an anesthetic has to be given, predisposes to shock, with its train of symptoms or symptom-complex. We know that the handling of the abdominal viscera causes what is known as traumatic paresis of the same. We know that the blood-pressure immediately falls. What is the underlying cause of this fall of blood-pressure and this paralysis of the viscera? So far as I have been able to find out from experimental studies, it is due chiefly to two factors: first, the trauma inflicted by handling the viscera, and, second, the anesthetic. The anesthetic causes relaxation of all the voluntary muscles; it likewise causes relaxation of the smooth muscle, only in a much less degree.

Harry B. Schmidt,¹⁴ of Ann Arbor, carried out a set of experiments amongst a group of

febrile patients (non-operative) in regard to blood-pressure. He found that the first injection of 1 c.c. did not have very much effect upon the same, but that the second dose given about one-half hour afterward markedly increased the diastolic, but only slightly the systolic, blood-pressure. The systolic would go up about 5 mm., but the diastolic blood-pressure would go up anywhere from 5 to 20 mm. The quality of the pulse became much better; it was fuller and of a better sustaining quality.

C. A. Hill,¹⁵ of Pittsburgh, working along the lines of shock prevention, carried out a set of interesting experiments in regard to the fall of blood-pressure during operations. He found that the blood-pressure would fall about 15 mm. shortly after the abdomen was opened, and would then stay at this level throughout. He also found that there was a corresponding rise in the pulse. He, therefore, gave 1 c.c. of pituitrin when the operation was about completed, and then a subsequent dose of 10 minims just before the patient left the table. He found that in 10 to 12 minutes after the first injection the blood-pressure would rise about 5 mm., and remain there. After the second injection the blood-pressure would rise quite suddenly up to its normal level, sometimes a little higher; and it would stay up until the patient was awake again, and things would adjust themselves. There was also a corresponding fall in the pulse-rate, which also was permanent. At this point I want to quote Dr. Hill: "During the past two and one-half years and embracing about eight hundred abdominal operations where pituitrin has been used, I have not had any symptoms of shock develop, except in two cases where an apparent heart-exhaustion developed, but both of these recovered." Dr. P. M. Goddie¹² states that at the first sign of shock he always prescribes pituitrin to be given in repeated 0.5 c.c. doses, and invariably after one or two injections the patient's condition is improved: the pulse becomes of a better quality and the pallor disappears.

Pancoast and Hopkins¹⁶ carried out a set of experiments in apparently normal patients in a charity hospital. They made use of the barium meal and enema in conjunction with the fluoroscope, to find out the action of the extract upon the alimentary tract. The patient was first given a barium meal, and the action of the stomach and intestines watched and its progress timed. The following day a second meal would be given, but ten minutes before this 1 c.c. of pituitrin was administered hypodermatically and repeated

in 0.5 c.c. doses hourly. They found that the tone of the stomach was considerably increased; and peristalsis increased in most of the cases, but not in all. In one or two cases it was decreased. The small intestine was affected in only one or two cases. The tone was markedly increased in the large bowel, but peristalsis was not enhanced to any marked degree, especially with the meal. When the enema was given both tone and peristalsis were increased. The time it took the meal to pass through the alimentary tract was considerably shortened in 75 per cent of the cases examined.

The most troublesome symptom following laparotomies is undoubtedly the condition popularly known as "gas pains" or intestinal paralysis. The convalescence, even from the most trivial operations, is often made unbearable by the discomfort due to delayed peristalsis,—the paralysis due to manipulations of the bowels. Invariably these pains are so severe that they require hypodermics of morphine. The morphine relieves the pain, but in few cases does the distention disappear, and consequently some more hypodermics of morphine are required. We all know that morphine tends to paralyze the bowels, and it seems as though one were adding insult to injury by giving it.

Dr. T. W. Harvey¹⁷ has written a very interesting article on his experience with the use of pituitrin in "gas pains." He also cites a list of different abdominal cases where it has been used. He claims that he has cut down the morphine injections about three-fourths the usual number. The method he uses is to inject 1 c.c. of pituitrin intramuscularly, either right after the operation or four hours afterward, repeating if necessary, but seldom giving more than two to four doses. If this does not make the patient comfortable morphine is given in small doses to allay the pain. If not given early and "gas pains" appear, pituitrin is usually resorted to. According to Dr. Harvey the immediate effect of the drug is to cause the patient to void urine. The next effect is to cause expulsion of flatus from the intestinal tract followed by great and appreciated relief. Dr. Harvey gives it even after operations for gangrenous appendicitis where general peritonitis has set in with persistent vomiting. He claims that when nothing else will stop the vomiting pituitary extract will. Dr. Frank R. Fursey,¹⁸ of Spokane, is also very emphatic in his assertions about the use of pituitrin as a cure and preventive of gas pains. "If given as a preventive, gas pains are entirely absent; if given after they

have developed, they disappear like magic," he says. Another post-operative condition is that of retention of urine. Dr. Ebeler¹⁹ cites a series of forty-five cases where all other methods, except catheterization, had failed. All except eight responded to 1 c.c. of pituitrin, and the eight left responded after a second dose. When the bladder is quite full it empties in five or ten minutes after the first injection.

We next come to the use of pituitary extract in obstetrics and gynecology. It is really in this kind of work that the extract first was used, owing to its oxytocic properties on the uterus. Now let us consider the use of pituitrin in the different phases of labor. First, we shall consider its use to induce labor. It has been found by several investigators that, although the drug has some effect upon the uterine musculature, this effect is markedly enhanced when dealing with a gravid uterus at or near term. Dr. F. L. Adair²⁰ last year published a very interesting article about its use as an oxytocic to induce labor. He showed where it should be used in every case, whether premature, mature, or post-mature, where there are no definite indications for a more rapid emptying of the uterus. It is of value because of the fact that it dispenses with a lot of manipulation. Before giving it, however, one should ask the question, Will this head or fetus be able to get through the bony pelvis? After this has been settled by actual measurements,—for, as Dr. Goodwin,²¹ of Columbus, Ohio, says, pituitrin and pelvimetry should always go hand in hand,—then it is safe to go ahead. The technic Dr. Adair uses is as follows: The patient is given four minims of pituitrin (hypodermatically) at frequent intervals, usually one-half hour. These injections are repeated until labor sets in, when they are discontinued altogether. He usually gives up to 2 c.c. feeling that, if that does not do it, it is a failure.²²

Some of the conditions in which pituitrin can be used are placenta previa where only a small amount of blood has been lost and where contractions are weak. Pituitrin will in many cases guard against severe hemorrhage during delivery of the baby and, in many cases, eliminate mechanical means for delivery. In threatened eclampsia, where gestation is practically at term, other things being normal, if the blood-pressure is not too high, pituitrin is of value. When a dead fetus is found in the uterine cavity, pituitrin may well be tried because nothing is to be gained by

getting the fetus out in a hurry, and there is always a danger of infection when mechanical means are employed.

In a primipara, pituitrin should never be used during the first stage of labor, because, if even small doses are given, bad results may obtain from cervical tears. In multiparous women on the other hand, where the cervix is soft and easily dilatable, a small dose of pituitrin will in about 80 per cent of the cases convert a slow, tedious labor into a quite progressive one. During the second stage, where secondary inertia sometimes sets in, pituitrin in small doses will, in the majority of cases, set up strong rhythmical contractions, and a normal labor result. The dose of pituitrin may have to be repeated and increased to bring this about, but it certainly is safer for both patient and accoucheur. Anyone who has tried to hold back a head after 1 c.c. of pituitrin has been given, and sometimes even less, knows the force that is exerted. During the third stage of labor, however, pituitrin is not used as often as it was when first on the market; and yet there are some who use it where there is considerable bleeding during the separation of the placenta. Some use it after forceps deliveries because, they maintain, that it tends to close up the sinuses and prevent general infection. It is used quite extensively in post-partum hemorrhage where a quick response of the uterine muscles is desired. In doing Cesarean section some accoucheurs give 1 c.c. of pituitrin just before they make the incision in the uterus. Dr. Bandler²³ gives 1 c.c. morning and evening for three days following section, because, he maintains, if the uterus is kept in good tone there is less tension on the sutures.

Pituitrin is being used more and more in gynecological surgery. In any condition which tends to produce atony of the uterine muscles pituitrin is of value. According to Bandler²³ any form of uterine hemorrhage is benefited by pituitrin, except where malignancy is the cause. Pituitrin is especially of value in bleeding after curettage. Dr. Ziegler²⁴, of Pittsburgh, has reported a series of cases where he used it routinely during curettage. Just as soon as he has dilated the cervix, 1 c.c. of pituitrin is given hypodermically. He claims that there is less danger of perforation of the uterine wall if the muscular tone is good. It is where you have a flabby uterus to curet that perforation is most likely. He also claims that where the muscles

are firmly contracted down, there is less danger of the infection extending higher up into the tubes and the peritoneum. In taking care of abortions, although pituitrin is of little value in bringing them on, it is of decided value to complete an abortion that is so far advanced that it cannot be prevented. When there are two to three fingers' dilatation and a considerable show, 1 c.c. of pituitrin will, in the majority of cases, take care of the rest. Even in those cases where the fetus has been expelled, the drug is quite efficacious to expel the remainder of the membranes and placenta. Dr. Bubis²⁵ claims that he

After one hour and fifteen minutes the pulse was 120 and weak. One c.c. of pituitrin was given. The pulse-rate fell slowly (see chart). The operation ended after two hours and ten minutes, pulse going down and staying below 90 all that day.

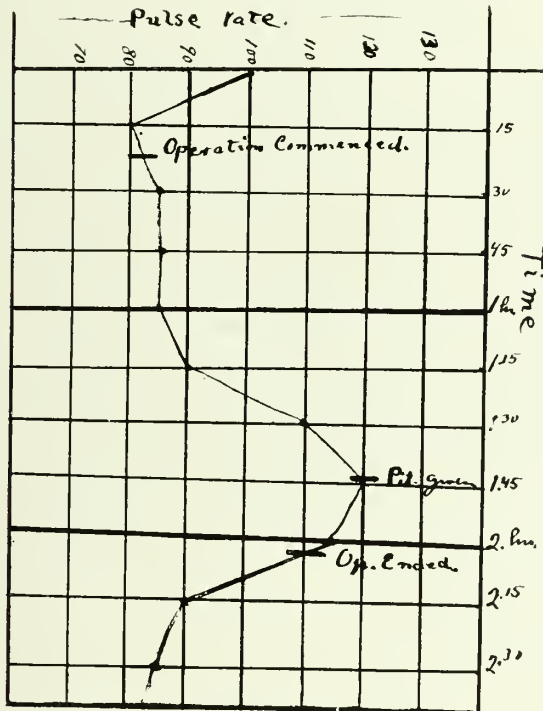
CASE 2.—Female, aged 38, pregnant, multipara. All previous labors instrumental. Two months postnatare. Slight pains one morning; had high, warm soap-suds enema. Pains disappeared. In the following week slight pains; no effacement, no dilatation; cervix, soft. Measurements satisfactory. Three minims of pituitrin given. Pains became stronger and more frequent. After two hours of labor, the pains became weaker and farther apart. Effacement complete, dilatation three-fourths. Patient taken to delivery-room and prepared, and four minims of pituitrin given. Pains became stronger, and regular every two minutes. Baby delivered in twenty minutes after the last injection. Ether analgesia used the last ten minutes. Both baby and mother in fine condition. No tear.

CASE 3.—Female, aged 24, pregnant and in labor. First pregnancy. External measurements 26, 29, 32, 20. Fetus in o. l. a. position. After being in labor for twenty-four hours the pains got weaker. The cervix was quite soft, and dilatation nearly complete. The head was pretty well moulded. Three minims of pituitrin given. Pains became stronger, closer together, and rhythmical. Head of baby on perineum in fifteen minutes. Pains began to get weak again. Four minims of pituitrin given. Thirty minutes after the last injection, the head of the fetus was delivered. No tear. Slight first-degree tear when the shoulders were delivered. Mother and baby in fine condition.

CASE 4.—Female, aged 25, multipara, in labor. Both previous labors instrumental. Pelvic measurements good. After thirty-six hours in labor, the pains were only three minutes apart, but were weak. Pains had been weak throughout. Head engaged, o. l. a. position, easily pushed back. Cervix, soft; effacement almost complete; dilatation enough to admit two fingers. Patient taken to delivery-room, and four minims of pituitrin given. The pains became stronger and only two minutes apart. Dilatation complete in fifteen minutes. No bloody show. In thirty minutes the head was on the perineum, and one hour afterward a seven-pound baby boy was delivered. Only a slight tear in the fourchette. Patient in fine condition, and well satisfied with relief afforded.

CASE 5.—Male, aged 53, came in with diagnosis of malignant prostate. Patient under nitrous oxide-oxygen-ether anesthesia for one-half hour. Section of gland removed for microscopic study (suprapubic route). Considerable bleeding during operation. Pulse fair when he left the operating room. When returned to his room, the patient was in profound shock. Pulse almost imperceptible (180). Artificial heat applied; one quart of normal saline with 1 c.c. of pituitrin was given intravenously. In fifteen minutes the patient's color began to come back, the pulse became stronger and slower (160). In one-half hour the pulse was down to 90, and stayed down. Very little bleeding afterwards.

CASE 6.—Female, aged 51, operated on for multiple hydatid cysts of the abdomen. General peritonitis developed; intractable fecal vomiting. Stomach lavages given every four hours, and enemas of all descriptions, but patient still kept on vomiting. The patient com-



has avoided many a curettage and manipulation by giving 1 c.c. of pituitrin. If it doesn't work you can always go in and clean the uterus out. It tends to check the hemorrhage, guard against the introduction of additional or outside bacteria to the very fertile soil existing in the uterus at such a time, and also, as I have mentioned before, it tends to shut out infection.

Before closing this brief review I want to cite a few cases I have had an opportunity to study during the last six months:

CASE 1.—Female, aged 34, married, very nervous. Nitrous oxide-oxygen-ether anesthesia, the former only for five minutes.

Operation: Double salpingectomy, suspension of uterus, appendectomy, and liberation of adhesions. The pulse fell to 80 the first fifteen minutes of the anesthesia. For subsequent rise in pulse see accompanying chart.

plained of extreme thirst. Enteroclysis started, but expelled. A very thorough gastric lavage was done, a soap-suds enema given, and at the same time 1 c.c. of pituitrin was given in one quart of normal salt solution intravenously. Enema expelled with good results. Enema repeated in two hours, and also pituitrin, 1 c.c. hypodermically. A lot of flatus and particles of stool expelled. After three hours gastric lavage was done again; returned almost clear. The patient was given $\frac{1}{6}$ gr. morphine for pain afterwards; rested for four hours; did not vomit for thirty-six hours, and then only small part of broth just taken.

CASE 7.—Female, aged 23; long protracted labor. On second day the bladder appeared quite distended. The patient could not void spontaneously. Hot suprapubic compresses, hot lemonade, and sweet spirits of niter were tried, but all failed. One c.c. of pituitrin (O) was given; ten minutes later 62 oz. of urine was voided spontaneously.

CASE 8.—Female, aged 14; operated on for appendicitis. On the second day she developed severe pains all over the abdomen. She belched up a lot of gas. The stomach was as tense as a bass-drum, not tender. Temperature, 99.2°; one c.c. of pituitrin was given, and a rectal tube inserted. Twenty minutes later she expelled a lot of gas. She was promptly relieved, and slept all night without morphine.

CASE 9.—Female, aged 28, five months pregnant. Had had uterine contraction for twenty-four hours. The pains could not be controlled by morphine. Made a rectal examination, and found the os almost completely dilated. Extensive hemorrhage. Ordered 1 c.c. of pituitrin given. In fifteen minutes the fetus with its membranes including the placenta was expelled; bleeding stopped promptly. Temperature never went above 99F.°

SUMMARY

From the foregoing I have concluded—

1. That the pituitary extract is of benefit

wherever there are atonic involuntary muscles to deal with.

2. That in obstetrics one should always look out for contra-indications to its use, and in their absence to start with small doses.

3. That manipulations in obstetrics and gynecology, with their dangers of hemorrhage and infection, can be eliminated, or at least minimized, in a large proportion of the cases, by cautiously using pituitrin.

BIBLIOGRAPHY

1. Vesalius: *De Corporis Humani Fabrica* (1553).
2. Sömmering: *Die Anatomie*.
3. Schaefer and Oliver: *Jour. Physiol.*, vol. 18, 1895.
4. W. H. Howell: *Jour. Exp. Med.*, 1898, 245.
5. Schaefer and Vincent: *Jour. Physiol.*, 1899, 87.
6. Falta and Iveovic: *Wien. klin. Wochenschr.*, 1909.
7. Shamoff: *Am. Jour. Physiol.*, vol. 39, 268.
8. Dale: *Biochem. Jour.*, 1909, vol. 4, pp. 163-427.
9. Ott and Scott: *Proc. Soc. Exp. Biol. and Med.*, 1910, viii, 48.
10. G. B. Roth: *Jour. Pharm. and Exp. Ther.*, 1914, vol. v.
11. Schwarz: *Am. J. Obst.*, vol. 73, p. 77, 1916.
12. P. W. Goddie: *Kentucky Med. Jour.*
13. Citelli: *Ztschr. f. Laryng., Rhinol. u. Ihre Grenz.*
14. H. B. Schmidt: *Arch. Int. Med.*
15. C. A. Hill: *Boston Med. and Surg. Jour.*, vol. 5, p. 15, 1913.
16. Pancoast and Hipkins: *N. Y. Med. Jour.*, vol. 105, pp. 7 and 289.
17. T. W. Harvey: *Med. Rec.*, vol. 4, p. 21, 1914.
18. F. R. Fursey: *Med. Council*, December, 1912.
19. Ebeler: *Zeitschr. f. Gyn. u. Urol.*, vol. 4, p. 55, 1913.
20. Adair: *Interstate Med. Jour.*, vol. 23, p. 1111, 1916.
21. Goodwin: *Am. Jour. Obst.*, vol. 73, p. 77, 1916.
22. Gaugh and Meyer: *Arch. mens. d. obst. et de gynéc.*, 1912.
23. Samuel Bandler: *Am. Jour. Obst.*, vol. 73, p. 77, 1916.
24. Ziegler: *Am. Jour. Obst.*, vol. 73, p. 77, 1916.
25. Bubis: *Am. Jour. Obst.*, vol. 73, p. 673, 1916.

TOTAL SYMBLEPHARON*

By J. A. PRATT, M. D., F. A. C. S.

Instructor in Ophthalmology, University of Minnesota

MINNEAPOLIS

In total symblepharon, as well as in any symblepharon, the aim of the surgeon should be to restore the condition to normal with the least possible operative procedure. To Hotz, Wilder, Weeks, and Woodruff we owe the great advance in operating for this condition. The paraffin-coated block-tin plates, and Weeks' method of restoration of the inferior cul-de-sac by anchorage to the periosteum of the rim of the orbit, have made the transplanting of the Thiersch grafts possible. In previous operations my difficulty was the placing of the grafts, and I present to you a method to overcome this difficulty.

While possibly this method is not new, I am unable to find it described. It is the suturing of the Thiersch grafts to the block-tin plate, which avoids all difficulty in the handling of the grafts, and greatly simplifies the operation.

In the case I have to report, the operation was by this method, and was as follows:

About six months before I saw the patient, he was burned by hot metal. The eye, as well as parts of the edges of both the upper and lower lids, was destroyed. The injured eye was eviscerated by the attending physician; and when healed there was total symblepharon with a fissure where the palpebral opening existed. The mucous membrane was entirely destroyed.

*Read before the Chicago Ophthalmological Society, May 21, 1917.

With a surface so extensive the question of manipulating the large grafts necessary to cover the wound, suggested the idea of suturing the grafts to the plate. A plate of block tin a little larger than a normal conjunctival sac, and curved to fit the same, was made. A double row of holes was bored through the center in the longer diameter, so that it would be necessary only to cut a graft large enough to cover one half of the plate, and each graft could be sutured on separately.

Commercial paraffin was used to coat the plate, care being taken to clean each hole of the paraffin.

After the grafts were cut from the arm, they were sutured to the plate with the raw side out, and the sutures were tied on the convex surface. The plate with the grafts attached was now placed in warm normal salt solution.

In preparing the socket, the lids were first dissected free from the shrunken globe for about one-eighth of an inch, and an anchor suture was passed through the globe to be used to draw the



Fig. 1.

Fig. 1. Shape of block-tin plate used in the first operation.



Fig. 2.

Fig. 2. Shape of plate used in the second operation stump in different directions while dissecting off the lids. The lid-dissection was performed with a Beard lid-knife to the extreme limit of a normal superior cul-de-sac, and to the orbital edge inferiorly. (After the dissection the orbital edge should be felt sharp and distinct.) After the wound was dry, the plate with the grafts was slipped into place, and allowed to remain free. Both eyes were then bandaged, and the patient was kept in bed. On the second day the bandage was removed from the operated side, and an instrument passed between the edges of the lids, and the secretion was removed. Thirty-five per cent argyrol was now instilled. I have prevented partial symblepharon in fresh burns in the eye by the instillation of 35 per cent argyrol, after separating the raw surfaces. The coagulation and deposit keep the surfaces from growing together. This line of treatment was continued for six days, at which time the sutures used to

hold the grafts to the plate were removed, leaving the plate free and the grafts adherent to the new socket. The bandage was then removed from the well eye, and the patient allowed to go home and report to the office for treatment.

The holes in the plate allowed the cavity to be flushed. At the end of twenty days the plate was removed, small granulation points were nipped off, and a smaller prosthesis of block tin was introduced. The cavity continued to shrink, and at the time the case was presented to the Society, October 16, 1916, the prosthesis worn was about one-half the size of the original operative prosthesis, and the cavity was entirely lined by epithelium. The case was presented for advice

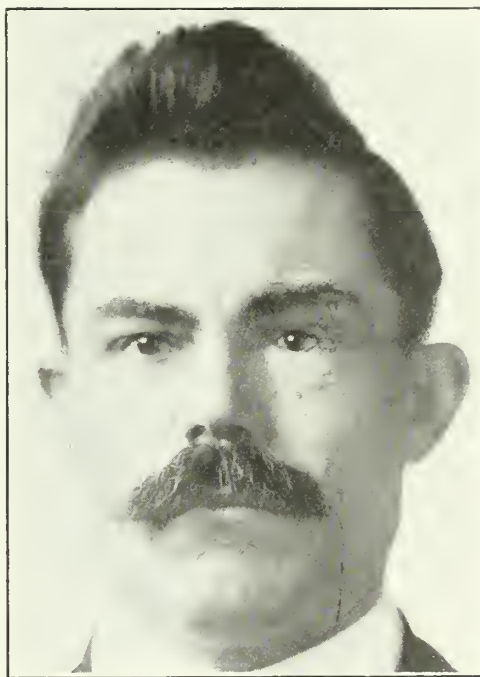


Fig. 3. The end-result.

in reference to the use of foreskin in deepening the shrunken superior and inferior cul-de-sac. Dr. Suker at that time advised against the use of foreskin because of its future shrinkage, but later at the Academy meeting in Memphis, recommended its use for these cases.

In the second operation to deepen the superior and inferior fornix, half-moon plates were used with a row of holes at the palpebral edge through which to suture the grafts, while in the edge of the plates opposite the suture holes were placed two holes for anchor sutures.

The Weeks' operation for the restoration of the inferior cul-de-sac was performed. In operating on the superior cul-de-sac the anchor sutures

were brought out at the superior edge of the orbit, and tied over a roll of gauze. The technique of placing the grafts was the same as in the first operation, except that grafts were sutured to the enlarged external and internal canthi.

The results, which are seen in the photograph herein submitted (Fig. 3), were obtained by these two operations.

I think there were two mistakes in the first operation: the grafts were made a little too small, and the external and internal canthi should have been covered by suturing grafts to the same.

I feel confident that if these two mistakes had not been made, the socket would have been completely restored by the first operation.

DISCUSSION

DR. GEORGE F. SUKER said the use of foreskin was not very applicable when one wanted to cover a large surface as it had a tendency to contract, particularly where excessive cicatricial tissue had already been formed, and where one had to cut cicatricial tissue to get a large space to be filled in with a graft. He had discarded the use of foreskin for grafting, with the exception perhaps of cases of resection of the tarsus for trachoma.

He had under observation a patient who had a double symblepharon of the upper and lower lids, and an intact eyeball, in which he succeeded in freeing the upper and lower lids, and this man was soon able to recognize daylight from darkness, and to recognize moving objects. In this particular case he used foreskin seven or eight times, and he was still trying to get a suitable graft for the upper cul-de-sac.

As to fixing the graft to the plate, he stated that the late Dr. Holz employed that method constantly before he inserted the graft. He thought this was one of the reasons Dr. Pratt got so good a result, and there was no doubt that if this method had been employed in the beginning a second operation would have been avoided.

The secret of successful grafting is that the graft be fixed to the plate, and fixed to the plate-receiving area by means of sutures. Secondly, the graft should be three or four or even six times larger than the area to be filled in. He had seen transplanted grafts half the size of his hand, or even larger, shrivel down to nothing. An essential factor was to have, not just skin, but skin plus a little subcutaneous tissue or fat, and to be very careful that this subcutaneous fat was a little vascularized; also, one should be sure that the receiving area was not dry with a clot of blood. Preferably, it should be slightly oozing, not running, but just moistened. In the next place, one should be careful not to allow the graft to remain in normal salt solution any time, but should cut from the area and sew to the plate, and transfer it immediately without passing through normal salt solution or any other kind of solution. One should prepare the area to be grafted surgically, and that was all that was necessary, and should have the receiving area in such a condition as to be able to receive the graft, and then cut the graft and do it quickly.

DR. WILLIS O. NANCE said the case reported by Dr. Pratt was an exceedingly interesting one, and the result very good. It was an operation that was devised, he thought, by one of the members of the Society, Dr.

Harry Woodruff, about ten years ago. Dr. Woodruff did considerable work along this line at the Eye and Ear Infirmary at the time, including attaching of the graft to the plate.* The speaker did the operation a number of times and remembered very well an experience he had at first in getting the graft properly sutured to the plate. It was not an easy thing always to do this. He cautioned the members of the Society against using this method in cases where the eye remained in partial symblepharon. He had the unfortunate experience at one time of seeing a cornea become necrotic undoubtedly as the result of the insertion of a metal plate in the eye. Since that time he had been very careful about using this method in cases where the eyeball remained in the orbit.

DR. RICHARD J. TIVNEN, in speaking of the method of anchoring the graft to a tin plate, said he saw Dr. Woodruff employ this method at the Eye and Ear Infirmary. In a recent case he had the same difficulty that Dr. Pratt had, from adhesions forming about the inner canthus, and he was glad to know the use of argyrol prevented the formation of these adhesions. Shrinkage could be prevented by inserting a block-tin plate, and keeping it there for a certain length of time so that things became adjusted more or less permanently.

Dr. Parker, he stated, some years ago showed a method of making grafts by the use of vaseline. It was difficult to get a graft large enough. It should be very much larger than the area one was going to cover. Dr. Parker covered the arms with vaseline, used a razor in removing the grafts, and the grafts became separated very easily. He insisted on having the field perfectly dry before applying the graft. Another thing Dr. Parker insisted on was an open dressing for these cases, as it did much better than if one covered the grafts over. Proper anchorage of the graft was the vital thing. Sometimes the speaker had taken the graft for the upper cul-de-sac, and inserted a suture in the apex or bottom, and in addition put in a block-tin plate. There was difficulty in getting the surfaces apart at the inner and external canthi.

DR. THOMAS FAITH thought the method of anchoring the graft described by Dr. Pratt was a little different from that usually employed. If he understood him rightly, he anchored, not only the graft, but the plate up in the cul-de-sac. Most operators attached them to the edge of the lid, keeping them in that position, and allowed the plate to hold itself in the cul-de-sac by being fastened to the lid. He had seen a number of cases in which the plate had been gradually pushed out before one was ready to take it out. The scheme of anchoring the graft to the plate and all, would obviate that.

DR. FRANCIS LANE said a point was brought out in the preparation of the Thiersch graft that the vascularized pits of the papillae of the skin should be left intact if laid on a dry surface. With slight oozing of serum the capillaries very rapidly grew from the prepared surface onto the vascularized pits, and minimized the shrinking process, which took place after the graft was put in place.

DR. PRATT, in closing, said he had read Dr. Wood-

*Note: At the June meeting of the American Medical Association, in New York City, Dr. Woodruff informed me that he had never attached the graft to the plate before insertion, nor did he know of any one having done so before.—THE ESSAYIST.

ruff's paper in 1903, and, if he was not mistaken, Dr. Woodruff anchored the plate to the edge of the lid. He had been unable to find from reading the literature that any one had sutured the graft to the plate before placing the plate in position. At the first operation the plate was left free in the dissected socket. The second

operation was a Weeks' operation with the exception that the graft was sutured to the plate before it was inserted in place. He had not been able to find any one who had sutured the graft to the plate, and this feature not only simplified the operation, but had a great deal to do with the end result in his case.

TREATMENT OF SURGICAL SHOCK*

By JOHN H. RISHMILLER, M. D., F. A. C. S.

Surgeon to the Swedish and Fairview Hospitals.

MINNEAPOLIS

The pathologic etiology of shock has long been a perplexing problem, but after Crile's publication, in 1899, of "An Experimental Research into Surgical Shock on One Hundred and Forty-eight Animals," the treatment has been placed on a stronger and more rational basis; and since that time therapeutic agents, such as (1) adrenalin chloride, (2) pituitrin, (3) blood-transfusion, (4) hypodermoclysis, (5) enteroclysis, and (6) saline solution by intravascular route, have been employed with considerable success, and have materially standardized the treatment. Surgeons who desire to treat shock will find it safest to resort to one or two of the remedial methods indicated, depending on the etiology, that is, whether the patient is suffering from traumatic or psychic shock, for we readily realize that in psychic shock blood-transfusion cannot be considered as rational therapeutics. The blood-pressure apparatus is one of our main guides in determining the vital resistance of our patients, and I desire to state that one must not be led astray with what, on digital pressure, appears to be a slow and fairly strong pulse, for a slow, full pulse signifies diminished action of the vasomotor system,—in other words, the vasomotor system may be on the border-line of being wrecked, and we may be led, by digital compression in examining the pulse, into false security. Furthermore, it has been experimentally demonstrated that a crushing injury to sensory or mixed nerves produces more shock than a clean-cutting division of nerves; and in a patient with a good blood-pressure, who has sustained a crushing injury of an extremity, immediate operation is indicated, because, otherwise, marked shock may insidiously develop and prevent the indicated procedure. In my opinion, morphine in large and repeated doses is always indicated in shock, whether the patient is in extreme pain or in such a crushed condition that he has no pain, because the morphine

protects the medullary centers from afferent stimuli. In extreme shock where we are compelled to operate on a crushed lower extremity, spinal anesthesia may, as a rule, be safely employed, for it acts under the same conditions, that is, protects the medullary centers from afferent stimuli. I have three cases in which it would have been entirely irrational to administer a general anesthetic, on account of the fagged-out condition of the vasomotor mechanism, and where amputation was performed, leaving the blood-pressure tension in the same relative strength after as before the operation. We have two strong weapons in adrenalin and pituitrin for combating shock, as both act on the unstriated muscle fibers of the arterioles, and increase the area of peripheral resistance. Adrenalin should be given in normal salt solution by the intravenous route, thrusting the needle of the hypodermic syringe, filled with adrenalin chloride, 1-1,000, through the soft rubber tube, close to the canula, and during the course of one or two minutes injecting about 15 minims, which should be repeated in an hour as clinical discretion dictates.

In 1914, while attending the Clinical Congress of Surgeons in London, I witnessed an operation on gangrenous appendix vermiformis by Sir Anthony Bowlby at St. Bartholomew's Hospital. In describing the post-operative treatment he laid emphasis on what value the extract of the posterior part of the pituitary body has on the involuntary muscles of the body, stating that he administers this agent in all cases of bad surgical risks where intestinal peristalsis requires encouragement. Since that time, I have employed pituitrin extensively, particularly in all intra-abdominal operations to stimulate gastro-intestinal peristalsis and vesical atony; and I am convinced that the results obtained bear testimony that in pituitrin we have a strong therapeutic agent in carrying the patient over crises in low blood-pressure. Pituitrin is, as we learn by a study of the physiologic effects of animal experimentation,

* Abstract of a clinic presented before the Soo Surgical Association.

very similar in its effect to adrenalin, with the exception that adrenalin is more fleeting, and pituitrin more lasting, in its effect on the involuntary muscles. Pituitrin should be given in conjunction with adrenalin in combating shock. I have been in the habit of starting with 1 c.c., hypodermically, and repeating with 0.5 c.c. every

my clinical memoranda, an accurate description of the radiographic findings and also minute delineation of the extensive soft and sensory tissues involved, which were the cause of over-stimulating the vasomotor center and thereby practically wrecking the vasomotor apparatus.

The patient, aged 26, was injured on Novem-



Fig. 1. Lateral view. Comminuted fracture of the right tibia, and oblique fracture of the fibula at the middle and lower third. Characteristic displacement as caused by gastrocnemius.



Fig. 2. Reduction maintained by unique mortise-like fracture of tibia in which position union was ultimately obtained.



Fig. 3. Lateral view taken some obliquely. Note the large fragment extensive comminution of right tibia.

two hours, depending upon the clinical conditions encountered.

While we are having this meeting at the Swedish Hospital, I desire to take the privilege of showing you a patient who has recently gone through severe crushing injuries, followed by marked degree of shock. I will give you, from

ber 16, 1916. Radiographic examination revealed the following conditions: comminuted fracture, almost projecting through the skin, 5.5 inches from the lower articular surface of the right tibia; fracture of the right fibula just opposite the tibia fracture; oblique fracture, in good apposition, at the middle third of the left fibula; frac-

ture of the left os calcis; and small piece of bone in front of the left elbow, probably due to the ligament or tendon being torn from its bony attachment. The soft-tissue injuries were as follows: a large crushed wound, 9 inches long, in front and inside of the left thigh, making a large internal flap, with the skin crushed loose, freely exposing the femoral vessels and all the muscles on the inside and part of those on the posterior surface of the thigh down to the popliteal space (a long iron pin evidently penetrated the skin and hooked around the sartorius muscle, lacerating and tearing it across); the left heel extensively crushed, more on the inside, and is black and blue, and the soft tissues will slough; the left hand extensively crushed, and the web between the thumb and the index-finger completely split open, and the abductor pollicis muscle protruding sausage-like; the middle, ring, and small fingers extensively crushed, and the balls of three fingers split open, and the soft tissues crushed loose from their terminal phalanges, and the nails partially crushed loose; deep, circular wound, 1.5 inches long, exposing the tendon on the flexor surface of the left ring-finger; deep wound exposing the tendon, 1.5 inches long in the flexor surface of the left small finger; deep bruise, with extensive scratch abrasion, on the dorsum of the left hand; extensive deep bruise about the left elbow; deep bruise with small wound on the inside, and another on the outside of, the left leg; and large superficial bruise and abrasion on the right side of the face.

The patient was very pale, in extreme shock, and felt tired. The shock, in this case, was not directly due to hemorrhage, as no large blood-vessel had been severed, but was due mainly to a bruising and tearing of sensory and mixed nerve filaments. The systolic blood-pressure was 95 mm., and fell to 85 mm. after being taken to the operating-room. It was deemed inadvisable to administer a general anesthetic with such low resistance as the heart had to act under. Two hours later the blood-pressure was 75 mm., the diastolic, 48 mm.; and the patient was almost on the brink of dissolution. Two days later the blood-pressure registered 120 mm., and then nitrous oxide and oxygen anesthesia was considered safe for administration.

The patient, after entering the hospital, voided urine which was in his bladder at the time of the

accident. Urinalysis showed its specific gravity to be 1,030; and it decidedly reacted to sugar. Two days after the injury the urine was sugar-free, and has been negative since.

It is interesting to note that I examined this man two months before for admission to the railway service as switchman, and the record shows that the specific gravity of his urine was 1,022, or normal.

I desire to add the conclusion from my article on "Shock and its Surgical Significance," published in the *New York Medical Journal*, March 10 and 17, 1900, as follows:

1. Sensory-nerve irritation sufficiently powerful to produce exhaustion of the vasomotor center causes a reflex paralysis and consequently a dilatation of the vascular mechanism.

2. Children and aged people with lax fibers and those addicted to alcohol bear a peculiar susceptibility to shock.

3. Hemorrhage is the most pronounced cause, particularly if venous, as then the equilibrium of the vasomotor mechanism is too suddenly deranged.

4. Two distinct types are recognized: prostration with indifference, and prostration with excitement.

5. Peritoneal absorption of septic material invariably terminates fatally through shock before evident manifestations of peritonitis have developed.

6. A subnormal temperature, irregular pulse, superficial respiration, cold and anemic extremities, and clammy perspiration contra-indicate operation.

7. The severity of operative shock depends largely upon the length of time required in the performance of the operation, and the duration and degree of the anesthesia.

8. Shock may, to a large degree, be prevented by any counterirritation applied to the extremities.

9. Brandy per os and morphine subcutaneously before operating are imperative precautions in prophylaxis.

10. The main treatment consists in stimulating the vascular system, preserving the animal heat, and supplying artificial heat to the body.

11. In acute hemorrhage or other excessive anemia, an infusion of normal saline solution is prudently resorted to.

THE
JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.

H. J. ROWE, M. D. - - - Casselton, N. D.

H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

JANUARY 15, 1918

NARCOTISM AND THE WAR

In the *North American Review* for December, Jeannette Marks has written a very interesting article on this subject, and she says that we are confronted today with a new level of conflict,—individual, national, international,—and a probably new level of intoxication. She points out that intoxication is an instinct deep seated in the human race and its experience, and calls to mind the fact that Mexico has already produced one demoralizing narcotic called *peyote*. This narcotic has been identified with the Aztec narcotic called "Sacred Mushroom," and with the so-called "Devil's Root" of ancient Mexico, so that it is nothing new, but it is produced in larger quantities now than formerly. Consequently the narcotic problem is re-shaping itself like the protean monster it is. The man who fights or works, or is over-worried, instinctively seeks relief in the selection of drink or drugs; and from all accounts, particularly since the Harrison law went into effect and since the great war has been on, narcotism bids fair to assume terrific proportions.

Most of the soldiers who go into battle and particularly those on the fighting-line, are provided with either tablets or hypodermics of morphia for immediate relief after a wound, and it has become quite the thing among soldiers to provide themselves, as far as possible, with these

relief-producing drugs. It was hoped that many of the addicts who had been in hospitals for two or three weeks, and had been cured of their habits, could be sent to the training camps, and be relieved, by their drills and exercises, of the necessity of drugs, and freed from the desire for drug-stimulation. In some camps this has not worked out as was expected, particularly those camps located in large cities. Soldiers have leaves of absence, sometimes for hours and sometimes for one or two days, and the old addict manages in some way to secure sufficient narcotic drugs to tide him over until his next leave of absence. Of course, the time will come when this same addict will be put under greater strain and stress, and where he will be removed from the source of temptation. There he will show his real fighting stuff, whether he is able to fight without drugs or drink, or whether he will fight out his own state of mind and become a real human factor in war.

The prohibition problem is in about the same situation. Russia started out with one sweep of the pen to eliminate vodka, and the influence was so great that Russia was looked upon as a wonderful country, chiefly because it was able to wipe out intoxicants; but the old habit has returned. Russia, in a state of revolution, of disruption, has gone back to its bad habits, perhaps not everywhere, but in many of its provinces. Soldiers are known to have broken into wine houses and wine cellars, and loaded themselves up as they did before the mandate was passed. Doubtless many of the men in war will come out yearning for drugs or drink, partly because they have been given to them during their course of battle engagement, or because they have become weary, over-strained, or crippled, and know they can obtain relief either by drugs or alcohol. Temporary relief it may be, but this temporary relief is going to prompt them to continue their habits of narcotism or alcoholism.

Drugs come high just now, because the drug-vender is reaping his harvest; and these injured, crippled men who suffer more or less pain are not to have an easy life after the war is over.

It has been said that there will be fifteen million cripples in Europe—fifteen million men handicapped, perhaps unable to work as they did before, perhaps with no work offered them, and they will resort to anything that will tide them over and relieve their misery and discomfort.

Notwithstanding the fact that all governments have practically taken over the products of the manufacturers of drugs, there still seems to be an adequate supply for most of the users, and these men are so cunning and so keen to acquire a momentary bit of rest that it will foster a habit in them which will be almost uncontrollable for a generation or more.

Drug and drink habits mean inefficiency in the future, and there can be no ideal conditions which will prevent the addiction to drugs when the circumstances are pressing and distressing. Consequently the warfare of the battle-exhausted and crippled man will in the future be with himself, and it will require a very strong supporting friend or master to keep him within reasonable bounds.

The Harrison law, although it has proved of great benefit to many addicts, has some drawbacks. A new drug bill of the Commonwealth of Massachusetts, recently drawn, and called almost perfect, has this same allowance of two grains of opium, one-fourth of a grain of morphine, and one-eighth of a grain of heroin or one grain of codeine. Consequently physicians will be sorely tempted to give the unfortunate man at least some casual relief, and when the time comes to cut off his supply, it is the man and not the doctor who will suffer.

It is necessary now to admit that the use of heroin has become a fixed habit with many people, although this is denied by German chemists in spite of the fact that heroin is extensively produced in Germany, and it is from Germany that we have derived our largest supply of heroin. In spite of all these drawbacks, the Harrison law has proven itself worthy of consideration. It has done something for the people and may later do more, but one is inclined to be rather pessimistic about the elimination of drink and drugs as long as human nature endures and presents its various problems as it does today; therefore, if prohibition comes in and drink goes out, drugs will come in in some form which will produce relief.

In closing this editorial, perhaps it would not be unwise to suggest that reform should begin at home; and when we say "at home" we mean in the medical profession, for it is well known that there are many medical men who are the greatest offenders and sometimes the greatest drug-users. They have no more resistance in the majority of instances than the poor crippled and exhausted soldier.

MINNESOTA STATE BOARD OF HEALTH PROBLEMS

At the annual meeting of the Minnesota State Board of Health, held in St. Paul on January 8th, Dr. Egi! Boeckmann, of St. Paul, was elected president; Dr. Christopher Graham, of Rochester, vice-president; and Dr. H. M. Bracken, executive officer. One member was transferred from the State Board of Health to the Advisory Commission, and the place of one member from Minneapolis, at the expiration of his term of office, was tendered to three good men: Dr. George Douglas Head, Dr. J. Grosvenor Cross, and Dr. L. A. Nippert, and each of them declined the appointment. It seems very unfortunate that three good men should decline a place on the State Board of Health without some very adequate reason, and, although the pressure of professional business is ostensibly the cause of the declination of the appointments, there must be something back of that, in these men's minds, for they hesitate to go onto a board in which politics has been needlessly and willfully injected.

That the State Board of Health will continue to do good work, there is no question, and that in spite of political influence unless the legislature should attempt to make other and more radical changes. If they do, it will simply mean that Minnesota will not maintain its high standards in public health measures, and any intrusion of political appointments will be a lamentable occurrence. Several governors before Governor Burnquist's accession to office have tried to interfere with the State Board of Health, and each time have failed to secure an influence, and every man who has been on the Board has realized this possibility and has worked conscientiously and faithfully to keep the Board free from political intrigues. It is to be hoped that nothing further will be done in this line. Of course, everyone knows that the average layman can run a newspaper better than the editor or proprietor, just as everyone knows politically that a politician is a better health officer than a doctor or a student of health measures.

At the meeting of the Board last week the question of the control of venereal disease came up, and regulations were adopted which will do much to diminish the spread of venereal diseases and will perhaps control them in a measure. If these regulations are approved by the attorney general, every physician in the state will receive a card upon which he must record his venereal

cases; and if he will assume the entire responsibility of their care and protection he need but record them by number. If, however, the patient is of the floating type, as so many of them are, he must record the name and address, and forward it to the State Board of Health for record. If the patient is incorrigible in any way, the regulations provide that he shall be placed under quarantine where he can be controlled, in order to prevent others from becoming infected.

It was further decided that Dr. H. G. Irvine, of Minneapolis, who has been in California a few months organizing the commission there, be placed at the head of the Board's new Division of Venereal Diseases. This puts him on the same footing as other division men, and he will be fully backed by the Board. Mr. Feezer has been made temporary head of the Social Hygiene Commission, the members of which were appointed by the Governor at the suggestion of physicians and laymen. He will begin the organization of this division; and, as he has had experience in Eastern states in this same problem, he can be relied upon to manage the division effectively, and to put it on a sound working basis. His services have simply been lent to the Commission, but he still remains a publicity agent for the Board.

The Board, at the suggestion of the Board of Control, will formulate regulations for the care of hospitals or baby farms in order that the poorer ones be weeded out and the others be put upon a rational basis.

DR. MURPHY RESIGNS FROM THE MINNESOTA PUBLIC HEALTH ASSOCIATION

Dr. I. J. Murphy, who has been executive secretary of the Minnesota Public Health Association for several years, has tendered his resignation to President W. L. Beebe, in order that he may offer his services for military work abroad. This step has been contemplated by Dr. Murphy for some time, and he evidently expects to do some sanitary work in France.

Dr. Murphy delivers himself of a grouch and attempts to belittle Dr. Bracken, the executive officer of the State Board of Health, by saying, according to the daily papers: "During my entire term of office I have found it possible to work in perfect harmony with the Advisory Commission, but about the second month I found the executive officer of the State Board of Health was antagonistic to this Association and to me.

The situation, due to his antagonism, has become intolerable." That is quite Murphysque, laying the blame on someone else for his unpopularity.

ANNOUNCEMENT—A HOSPITAL DEPARTMENT

In an early issue of THE JOURNAL-LANCET we hope to begin a *Hospital Department* with a specific purpose wholly different from the purpose of the general hospital department of most medical journals. The purpose of the department will be, in the main, the best solution of the problems connected with the community hospital, whether of two, ten, or forty beds.

Modern conditions have made community hospitals indispensable; and the more that are founded and conducted on proper principles, the better for the communities they serve.

The rapid increase in the number of hospitals in the Northwest is ample evidence of the demand for them. The lack of an understanding of the principles of their foundation and management is fully shown by the vicissitudes of many of them.

We desire to deal with the actual conditions the founders and conductors of these hospitals have to meet, and to point out, not only the causes of failure, but the causes of success in these undertakings.

Our new department will be conducted by a man of large practical experience and of recognized ability in this line.

BOOK NOTICES

A THOUSAND QUESTIONS ANSWERED. J. H. Kellogg, M. D., LL.D., Chief Medical Director of the Battle Creek Sanitarium, Battle Creek, Mich.: Good Health Publishing Co., 1917.

Here is a book of real value to medical men. It has real value because of its source (its author), its mode of preparation, and its scientific content.

If it be said that Dr. Kellogg is a faddist, it cannot be denied that he is a faddist with power; and this, together with what he has done, makes his work interesting and worthy of very careful study.

The thousand questions answered are a selection from the seventy or eighty thousand that Dr. Kellogg has received from his patients and from the public during the past forty years. Being thus selected from an enormous mass, they are more practical than the questions that are found in the health columns of the newspapers of the day. They cover the whole range of the health problem as seen by laymen, and thus the questions in themselves have great value to the physician

who would understand his patient's point of view. As to the third point, the scientific content or character of the work, it would be foolish to speak in general terms, either to praise or condemn. Surely, none of it is to be condemned as bad or unscientific, and but little of it as even faddish. The rest of it is a plain common-sense presentation of modern scientific thought on the health problems of the individual.

The volume contains 775 pages; it is admirably arranged, and is printed in excellent style. The young medical man who carefully reads it will find many of the problems that face him in his daily rounds solved, psychologically at least.

It is a really worth-while book.

GYNECOLOGY. The Practical Medicine Series Yearbook of 1917, Volume IV. Edited by Emilius C. Dudley, A. M., M. D., and Sydney S. Schochet, M. D. Cloth. Price, \$1.35. 232 pages. Price of the series of ten volumes, \$10. Chicago: The Year Book Publishers.

Each issue of this series is a marked advance over the previous annual. The volume of 1917 contains a very complete, concise, and accurate synopsis and review of the best material published on gynecology the past year. The editor has added some very valuable criticisms and opinions, two of which especially impressed the reviewer,—namely, conservation treatment of pelvic inflammations and a warning in the use of the Dakin solution in the uterine cavity.

This book should prove invaluable to the general practitioner and the student.

—CONDIT.

MISCELLANY

PSYCHOPATHIC ARMY WORK

A LETTER FROM LIEUT. FREDERICK P. MOERSCH,
M. R. C., OF MINNEAPOLIS, READ AT A DINNER
GIVEN ON DEC. 13, 1917, BY THE MINNE-
SOTA NEUROLOGICAL SOCIETY TO
THOSE MEMBERS LEAVING
FOR THE FRONT

I am indeed sorry that circumstances will not permit me to attend the dinner on the sixth of December. My memory carries very distinct recollections not only of the palatable food, but of the very enjoyable evenings spent at the neurological dinners, which have always served as a marked incentive and stimulus.

Perhaps a few words as to the things which have come to my attention may be of interest to the members of the Society. The magnitude, thoroughness, and, I may say, the skill with which the medical work is being carried out, are almost beyond belief, unless a person has interested himself in the matter.

All departments have gathered together the best men obtainable, and are bending every effort to make their sections as complete and thorough as possible, thus offering to the soldier the best medical attention obtainable.

It seems to be the plan to attach to each base hospital a psychiatric unit, which is to be under the supervision of the medical staff. Up to the present, the men at the base hospitals have been going over all enlisted men, making a preliminary examination, weeding out the more evident cases of nervous and mental conditions. Later, if the regimental surgeon discovers any case, the patient is transferred to these men at the hospital, who make a thorough examination and pass on his adaptability as a candidate for service. After the draft army has been completed, the work will undoubtedly be changed. It is the desire of the Department to train the men going into this line of work so as to arrive at a uniform working basis, which will tend to greater efficiency.

I am sure that it would be a surprise to you all to see some of the cases which are sent to camp. Thus the other day we saw several cases of multiple sclerosis, tabes, progressive muscular atrophy, etc. It also fell to our lot to see some cases from other departments. Thus a man had one leg about two inches shorter than the other; another was minus three fingers on one hand, while another had a glass eye. It would seem impossible that local draft boards could permit such men to reach camp.

The greater difficulty, and indeed a great problem, occurs in the mental deficiency group. The number is startling. The Terman revision of the Binet-Simon intelligence scale is that most commonly employed. The mental age of military service varies, depending to a great extent upon the judgment of the examiner. Ten and one-half is usually the lowest age accepted, but many cases scoring higher are turned down because of individual characteristics. On the other hand, it has been found that many cases below 10½ make good soldiers, as they are found to be very obedient and doing little independent thinking, following orders closely. Whether such cases should be accepted is somewhat doubtful.

Another difficulty is in the very early mental states, the psychopathic individuals and cases presenting signs of functional instability.

The great number of thyroid cases occurring in the lake districts, even though showing but slight, if any, nervous conditions, are considered potential "shell shocks."

From Canada we hear that one of the most severe types of nervous disorders resulting from shell shock is tremor. The aphonias, mutisms, and other disturbances seem to make fairly prompt recovery, but these cases of tremor are extremely resistive to treatment. It has become

more and more the feeling of medical men to keep patients who have recovered from shell shock at the rear or to send them home, as they nearly always have a return of the symptoms if sent back to the front.

It has further been the observation of men having had a large amount of material that, although shell shock is more common in cases predisposed to functional disorders, it nevertheless develops in men who have never had any disorder or indication of a nervous tendency.

The conclusion that both organic and psychopathic factors must be considered in "shell shock" hardly needs comment, as enough pathological material has been examined to show that following a terrific explosion organic changes do take place. Thus various men have divided these cases into two groups, organic and functional.

I shall not go into any further discussion, for my experience thus far has been very limited.

This I may say, that any man entering the service will certainly find plenty of good work and in spite of the fact that often it may seem that 95 per cent of one's duty is paper work, the other 5 per cent will well repay one.

I may say that I was, and still am, unable to explain the great prevalence of older men in the service. At Camp Custer the average age of medical men seems to be about forty. A young man is a rarity. Why? As time goes on, this undoubtedly will change.

I again express my regrets, and send my best regards to all.

I might add more from my present experiences, but think best to leave things stand as they are.

BRITISH OPINIONS OF AMERICAN MEDICAL OFFICERS

Col. T. T. Goodwin, the British representative on the U. S. Medical Board of the Council of National Defense, recently gave out extracts of letters received by him from British and French war officials speaking in high terms of praise of American medical officers now abroad. The following excerpts are interesting:

From an officer at the British war office: "The way the American authorities have come to our aid in the supply of American medical officers is much appreciated and their help has been invaluable."

From a surgeon general in France: "We are greatly impressed with the American medical officers; their keenness, energy, and quick perception are a positive tonic."

From a British staff officer at headquarters in France: "I hear very favorable reports on the work of the United States Army officers, and they are very popular with our people."

From a consulting surgeon in France: "The United States have sent us some splendid fellows to help. They are all out for work and danger, and it is difficult to keep any of them at the bases. They all rush for the field units."

From a surgeon general at the war office: "The American officers who come to us are almost without exception a most earnest and enthusiastic party of men. I hope I am doing all that is possible for their work and their personal comfort and happiness. I have recently been to a few hospitals where I found them at work, and I made special inquiries from them on these matters. All are satisfactory. All these men are far too modest as to their own attainments and capacity for administration, but they are observing, thoughtful men, and are going to make a fine organization of their own, avoiding our errors, which I am careful to point out as often as I can. They are invaluable to us."



THE TODD CLINIC, MINNEAPOLIS

A new building has been erected at 808 Mary Place, Minneapolis, for housing the Todd Clinic, for the treatment of diseases of the eye, ear, nose, and throat. This building is occupied by Drs. Todd and Patterson and their staff.

The structure is a two and a half story building of red brick and gray-stone trimmings. The offices occupy the two floors and cover an area of six thousand square feet. The arrangement of rooms is made very convenient to facilitate the work. On the first floor is located the optician, who has a separate entrance; the x-ray room and x-ray developing-room; the eye-operating room; the ear, nose, and throat operating-room; the laboratory, and rest-rooms for those patients who may remain during the day after an operation. It is not planned to keep any patients over night, and those

cases that require hospital attention are sent to a hospital. Many patients, however, may be operated on in the office, and may leave during the day or be transferred to a hospital if it is best for them to remain over night. On this floor are also located the laboratories, the rooms for filing histories and papers, and the stenographer's room. In a quiet corner of this floor is located the medical library.

On the next floor are located the main treatment rooms, and a large reception room on the right of the entrance into the central hall. At the far end of the reception room, entrance is gained into the inner hall where are situated on one side five consultation and refraction rooms and a dark-room; and on the other side are situated the eye treatment rooms and the ear, nose, and throat treatment rooms. These treatment rooms are all in white tile except the room for transillumination, which is in black tile. On this floor there is also a rest-room.

The building is provided with a signal system and other conveniences to facilitate the work. All the floors are hard; being either tarazzo or tiling. Carpet and rugs are not used in any of the work rooms.

A CHEAP PHYSICIAN WANTED

The following "bids wanted" is clipped from a North Dakota newspaper, and possesses some interest of a contemporary nature:

Notice is hereby given that sealed proposals for furnishing medical services to the poor of ——— County for the year 1918 will be received by the County Commissioners of ——— County at the office of the County Auditor at ———, N. D., up to 2 p. m. on Tuesday, Jan. 8, 1918, at which time such proposals will be opened and considered.

Successful bidder must furnish certified quarterly report of all work done by him, said report to show name of party treated, date when services were rendered and complaint from which patient was suffering.

Done by order of County Commissioners this 5th day of December, 1917.

NEWS ITEMS

Yellow Medicine County has engaged a school nurse for six months at \$90 a month.

Dr. Wm. Burke, of Preston, has purchased the practice of Dr. J. D. Walker at Wykoff.

Dr. A. O. Fasser, of Belle Fourche, S. D., has been ordered to report at Ft. Riley, Kas.

Dr. J. C. Rogers, of White Lake, S. D., has gone to Ft. Riley, Kas., for active duties.

The Sioux Valley Medical Association will meet in Sioux City, Iowa, on the 22d and 23d inst.

Dr. F. W. Briggs, of Moorhead, who has been seriously ill with pneumonia, is much improved.

Great Falls, Mont., has opened a temporary contagious hospital on account of an epidemic of scarlet fever.

Eleven trained nurses will soon leave St. Joseph's Hospital, St. Paul, to join the Navy unit organized there.

Miss Ruth Wier, of Minot, is the first trained nurse called into service from Minot, N. D. She has left for France.

The semi-annual meeting of the Sioux Valley Eye and Ear Academy will be held on January 21, at Sioux City, Iowa.

Dr. Elliott, in charge of the hospital of the Red Lake Indian Agency, at Bemidji, has been ordered to Fort Sam Houston, Texas.

Lieut. R. T. Knight, of Minneapolis, now at Allentown, Pa., with a Red Cross hospital ambulance company, has been made a captain.

Dr. A. Oftedahl, of Fargo, N. D., has been ordered to report at the Great Lakes training station. His services will be in the navy.

Dr. C. E. K. Vidal, of Great Falls, Mont., received a captain's commission for his Christmas present. He expects an early call to service.

Under Minnesota's new welfare laws, all maternity hospitals and infants' homes in the state are to be licensed and their work carefully supervised.

Dr. Thomas Lowe, of Pipestone, and Dr. G. E. Putney, of Paynesville, were re-appointed last month members of the Minnesota Board of Medical Examiners.

Dr. A. S. Rider, of Flandreau, S. D., has been honorably discharged from army medical service because of the condition of his health. He returned from Ft. Riley last month.

Lack of funds this year will force the health authorities of Minneapolis to give up the proposed rigid enforcement of the housing law—and will increase the city's death-rate.

Drs. Geo. D. Head, J. G. Cross, and L. A. Nippert, of Minneapolis, were appointed to fill a vacancy in the Minnesota State Board of Health, and each declined the appointment.

Dr. Lyle B. Riche, of Willow City, N. D., recently died in France of typhoid fever at the age of 26. He was a graduate of Johns Hopkins and was a member of the U. S. Medical Corps.

Dr. H. J. Rowe, secretary of the North Dakota State Medical Association, spent the holidays in Minneapolis, and also visited his son in Chicago, who is an assistant of Dr. Sippi of that city.

The demand for nurses for Red Cross work is so great that a special meeting of the Minnesota Board of Examiners of Nurses will be held on Feb. 1 and 2 in the Capitol building for examinations.

Hamilton Hospital, of Hamilton, Mont., which closed its doors on Dec. 20th because of lack of funds, will be reopened at once, as sufficient funds have been donated to meet the needs of the hospital.

The new hospital building which Drs. Holman & Williams, of Pine River, are erecting, will soon be ready for occupancy. It will be modern in every particular, and will accommodate thirty or forty patients.

Major J. P. Sedgwick, who has been doing work among the children of France, returned to Minneapolis just before the holidays, and has given a number of interesting public lectures on his work over there.

The demand for nurses in the army is so great that registration has been waived as a requirement for acceptance. The age limits are 21 and 45. Any nurse will be accepted if physically, professionally, and morally qualified.

Dr. William R. Polk, of Minneapolis, died on January 4, at the age of 64. Dr. Polk was a collegiate graduate of Princeton and a medical graduate of the University of Pennsylvania, and had practiced over thirty years in Minneapolis.

Dr. Edward B. Bracy, a retired physician of Mitchell, S. D., died on Christmas Day at the age of 91. Dr. Bracy began practice at Mitchell in 1882, and was in active practice for fifteen or twenty years. He was a highly esteemed citizen.

Dr. E. Haydn Trowbridge, formerly assistant superintendent of the Minnesota School for Feeble-Minded at Faribault, has established a home training school for unusual children at Kansas City, Mo., and will make this his life-work.

The County Commissioners of Cass County, North Dakota, of which Fargo is the county-seat, have adopted medical inspection of schools, instead of using the services of a county school nurse. School Superintendent Riley favors this action.

The Oakland Park Sanatorium was opened at Thief River Falls with elaborate ceremonies on December 28th under the auspices of the Sanatorium Commission. This is the tuberculosis sanatorium for Marshall, Roseau, and Pennington Counties.

Butte, Montana, has employed a quarantine officer, and the City Board of Health announces that a strict quarantine on smallpox and other contagious diseases will be kept. Several states, Minnesota being among the number, do not quarantine for smallpox.

Five North Dakota Red Cross nurses have gone to New York, and will soon sail for France. They are Miss Emma Sedahl, of Cheyenne; Miss Lelia Halvorsen, of Grand Forks; and the Misses Rose Clark, Mollie McNeese, and Loretta McDermott, of Fargo.

Dr. I. J. Murphy, secretary of the Minnesota Public Health Association, has resigned, giving the reasons for his resignation, according to the daily press, the intolerable condition due to criticisms of his management. Dr. Murphy will offer his services to the Government.

The country newspapers are writing much about Dr. Rosenow's new serum for infantile paralysis, and many consider it an absolute cure in all cases. Dr. Rosenow is very modest in his claims, and yet it has been demonstrated that his serum is full of promise.

Physicians in Montana, because of a recent law, can no longer issue certificates of successful vaccination unless the doctor issuing the certificate performed the operation within seven years. Violation of the law may cause a physician to lose his license to practice in that state.

Captain Emil S. Geist spent the holidays in Minneapolis, and while here closed his offices. He is in the Base Hospital at Fort Oglethorpe, Ga. This hospital has nearly 2,500 beds, and the orthopedic wards have nearly 700 beds. Capt. Geist has charge of these wards, and has several assistants.

Dr. J. Walter Marceley, of Minneapolis, will sail for France on the 23d inst. to do preventive tuberculosis work. He goes under the auspices of the Red Cross and the Rockefeller Foundation. His absence will probably be an extended one, and not dependent upon the date of the closing of the war.

The Commercial Club of Duluth has appointed a committee to investigate the hospital situation in that city with a view to having the supply of beds equal to any probable demand. It is claimed that the accommodations are now greatly inadequate. Drs. E. L. Tuohy and C. J. Wallace are on the committee.

Dr. J. A. Pratt for many years in special practice at Aurora, Illinois, has joined practice with his nephew, Dr. F. J. Pratt, of Minneapolis, and opened offices in the Metropolitan Bank Building. Dr. Pratt has been appointed Instructor in Ophthalmology and Otolaryngology in the University of Minnesota Medical School.

The Yankton (S. D.) District Medical Society held its annual meeting in Yankton on Dec. 23rd. The following were elected officers

for 1918: President, Dr. F. C. Smith, Yankton; vice-president, Dr. F. V. Willhite, of the State Hospital Staff; secretary-treasurer, Dr. James Roane, Yankton; delegate, Dr. J. A. Hohf.

At the annual meeting of the Red River Valley Medical Society, held on Jan. 2 at Crookston, the following officers were elected: President, Dr. H. A. Froehlich, Thief River Falls; vice-president, Dr. F. M. Dryden, Crookston; secretary-treasurer, Dr. R. L. Kirsch, Crookston; delegates, Dr. G. S. Wattam, Warren, and Dr. H. E. Nelson, Crookston.

The Sioux City (Iowa) *Journal* pays a high compliment to "a young physician" who settled at Elk Point, S. D., a quarter of a century ago, learned all the "gumbo trails," and won his way into the hearts of the people, remaining in Elk Point until his State called him to a larger service as "superintendent, planner, builder" of the State Hospital for the Insane. The young physician was Leonard C. Mead, still at the head of the State Hospital.

The Federation of American Societies for Experimental Biology, the American Association of Anatomists, and the American Society of Zoologists held their annual conference in Minneapolis the last week in December. They came and went unsung, few medical men knowing of the meeting. The attendance was comparatively small because of the absence of many members in Government service. A session was held at Rochester.

Sixteen recent graduates of the Medical School of the University of Minnesota have been commissioned officers in the Navy, and have gone into active service. Most of these men are from Minneapolis and St. Paul. Their names are as follows: C. O. Tanner, Samuel Solhaug, William Boquist, Oscar Levin, L. J. Roberts, Albert Lindall, B. A. Rosenthal, George M. Constans, E. C. Andreassen, Roscoe Jepson, A. T. Agnew, C. J. Hutchinson, E. K. Geer, H. A. Noreen, Frank Anderson, and W. A. Byrnes.

Some country, as well as some city, newspapers are printing all kinds of figures as to the number of nurses now and to be needed for the army, and these figures are often greatly misleading. If the army is increased to 1,500,000 men, 37,500 nurses, it is estimated, will be needed, while there are only 3,800 now in service. There are not 100,000 registered nurses in the country, but there are 200,000 other graduate and practical nurses.

Harvey, N. D., according to *Collier's Weekly*, is one of the most patriotic towns, judged by its

contributions of men and money for war purposes. With a population of 1,641, it has given 28 men to the army, 143 to the national guard, 7 to the navy, 6 to hospital corps units, and has 5 in the regular army. It also gave \$8,000 to the militia company; oversubscribed both Liberty bond loans (the second by ten per cent), and its Red Cross allotment by 50 per cent.

There was a "house-warming" of the new officers quarters at the Camp Dodge (Iowa) base hospital last month. Dr. J. C. Litzenberg, of Minneapolis, represented the faculty of the University of Minnesota. The new structure contains 56 rooms, and will accommodate over one hundred officers. The hospital buildings cover forty acres of land, and will be enlarged. The hospital is used for the care of patients and for work of training physicians for army work.

A second series of free clinics for the treatment and after-care of poliomyelitis cases has been announced as follows: At Minneapolis, Jan. 7-12; at St. Paul, Jan. 14-19, for cases from Chisago, Dakota, Ramsey, and Washington Counties; at Duluth, Jan. 21-26, for cases from Aitkin, Carlton, Cass, Crow Wing, Lake, Pine, and St. Louis Counties. A third series will be announced later and to begin in May. All physicians are invited to attend the clinics and especially to take cases to them.

Dr. Emma Lina Scholz Aldrich, of Bellview, died on Dec. 30th at the age of 43. Dr. Aldrich was one of the first women to graduate from the Chicago Homeopathic Medical College, getting her diploma in 1902. Death was due to uremic coma, and she was buried at her old home in Lake Zurich, Ill. She was a member of the A. M. A., the Minnesota State Medical Association, and the Camp Release District Medical Society. She was vice-president of the Minnesota Branch of the Woman's National Medical Society.

At the annual meeting of the Hennepin County Medical Society, on January 7th, the following officers were elected: President, Dr. E. K. Green; vice-president, Major J. F. Corbett; second vice-president, Dr. C. P. Nelson; secretary-treasurer, Dr. C. W. Pettit; members of the board of trustees, Drs. H. H. Kimball and W. A. Hall; members of the board of censors, Drs. A. E. Hedback and J. S. Macnie; members of the executive committee, Drs. Edward Moren and A. S. Hamilton; delegates, Drs. J. W. Little, F. S. Adair, M. J. Lynch, J. C. Litzenberg, J. W. Bell, and A. E. Benjamin; alternates, Drs. A. S. Fleming, J. G. Cross, W. A. Aurand, and C. W. Pettit.

Twenty years of corporate existence was completed by the Swedish Hospital at Minneapolis on January 4th. There were no exercises to mark the day, but the trustees of the hospital are planning a public celebration to be held on February 22d, which is the anniversary date of the opening of the first hospital and the reception of its first patient in an old dwelling rented by the organization at 1419 Ninth Street South, in 1898. The career of this institution, which was started without the backing or support of any particular religious denomination, is unusual in its success. The plan of financing the hospital, which has grown to a capacity of 160 beds in modern buildings, is unique and of especial interest to any community hospital that has to rely upon its own resources for maintenance and extension. "The Swedish Hospital just grew—lifted itself by its own bootstraps, so to speak," said Superintendent G. W. Olson in discussing the development of the institution recently. The hospital has received no large gifts, and every dollar donated to it has been expended in free service to the sick poor. The property now owned by the hospital, after twenty years of activity, is valued at \$250,000. Since the opening of the hospital it has treated 40,750 patients. The number admitted in 1917 was 4,500. The hospital is conducted by a non-stock, non-profit corporation, the members of which pay \$1 a year for an annual membership or \$25 for a life membership. The present membership numbers about 300. The affairs of the hospital are governed by a board of twelve trustees, four of whom are elected each year for a term of three years. The JOURNAL-LANCET has asked Supt. Olson to give an account of the development of The Swedish Hospital and a description of the plan of financing its building operations, and this will be published in an early issue.

MEMORIAL ENDOWMENTS OF THE HENNEPIN COUNTY MEDICAL LIBRARY

At the annual meeting of the Hennepin County Medical Society, on January 7th, it was announced that Dr. Charles H. Spratt and Dr. W. A. Jones would each give \$2,500 as memorial endowments for the foundation of departments in the medical library of the Society.

The interest of the first-named endowment will be for the purchase of literature dealing with ophthalmology, otology, rhinology, and laryngology. The interest on the other endowment will go

to the purchase of literature on nervous and mental diseases.

It is known that other departmental endowments will be made.

RECENT TRANSFERS AND ASSIGNMENTS OF NORTHWESTERN MEDICAL OFFICERS

Minnesota.—

Lieut. B. W. Kelly, Aitkin, from Camp Sheridan, Ala., to Camp Hancock, Ga.

Lieut. W. E. Lillie, Rochester, to Camp Sheridan, Ala., for neurological work.

Capt. O. E. Stewart, of Bricelyn, from Philadelphia to Fort Oglethorpe, Ga., for instruction.

Lieut. A. M. Hanson, of Faribault, from Philadelphia to Fort Oglethorpe, Ga., for instruction.

Lieut. E. J. Enberg, St. Paul, to Philadelphia, Pa., for intensive training.

Lieut. C. C. Leck, of Austin, from Fort Oglethorpe, Ga., to the Rockefeller Institute, New York, for instruction.

Capt. H. S. Willson, Minneapolis, to Camp Kearney, Calif.

Lieut. W. P. O'Malley, St. Paul, from Camp Dodge, Iowa, to Chicago.

Lieut. H. M. Lowell, Rochester, from Camp Grant to Chicago.

Lieut. Richmond Favour, Jr., Red Lake, from Boston to Fort Oglethorpe, Ga., for instruction.

Lieut. P. S. Epperson, Crosby, to Fort Riley, Kas., for instruction.

Lieut. A. D. Cornica, St. Paul, from New York City to Gernster Field, La.

Capt. W. H. Hengstler, Osakis, from Camp Travis, Texas, to New Orleans, La., for instruction.

Lieut. A. J. Wentworth, Mankato, from New York City to Park Field, Tenn.

Lieut. L. L. Elliott, Red Lake, from Kelly Field, Texas, to South San Antonio, Texas.

Major Wm. J. Mayo, Rochester, from the Surgeon General's office, Washington, D. C., to Rochester, Minn., for duty as medical advisor of Governor Burnquist.

North Dakota.—

Lieut. H. L. Saylor, Cogswell, from Fort Oglethorpe, Ga., to Camp McClellan, Ala.

Lieut. L. G. Eastman, Hazen, from Kansas City, Mo., to Fort Riley, Kas.

Capt. T. J. Strong, Williston, from Camp Travis, Texas, to New Orleans for instruction.

Montana.—

Capt. A. F. Longeway, of Great Falls, to Camp Grant, Ill.

Lieut. B. P. Blackstone, of Lindsay, from Fort Riley, Kas., to Camp Lewis, Wash.

Lieuts. J. C. Denney, of Clydepark, C. B. Fleischmann, of Froid, and S. T. Noland, of Warm Springs, from Fort Oglethorpe, Ga., to Camp McClellan, Ala.

Capt. T. A. MacKenzie, of Stacey, to Fort Riley, Kas.

THE UNIVERSITY OF MINNESOTA INAUGURATES PHYSICIANS' DAYS

The University of Minnesota Medical School is inaugurating physicians' days for the physicians of the state. The first meeting of the kind will be held during "Automobile Week," on Thursday and Friday, February 7 and 8. The clinical staff of the University Hospital will be on hand to welcome the visiting physicians.

A program covering all the major clinical branches has been prepared—clinics, operative and dry, ward rounds, lectures, demonstration of the simpler practical laboratory procedures are included.

The Faculty feel that they have a great responsibility to the profession of the state, and they wish the profession to know it. The State Medical School should offer something tangible to the profession of the state in the way of facilities, assistance and inspiration. They propose an "All-Minnesota medics get-together" movement for Minnesota, and this is the initial move. The Medical School is anxious to do its part. All it asks is that you will come.

The program for the first meeting and more details of the work will appear in our issue of February 1.

PHYSICIAN WANTED

A good physician is wanted for an unusually good location. Address C. N. Rostad, Westby, Mont.

MEDICAL BOOKS FOR SALE

New and used medical books for sale. Bargains. Write for our list. The Isca Co., Booksellers, Minneapolis, Minn.

LOCATION DESIRED

A physician and surgeon, also registered pharmacist, desires a location in a fairly large town or city. Address 102, care of this office.

PART OF OFFICE FOR RENT

Wanted, a physician to share the offices of a dentist in the Donaldson Building, Minneapolis. Rent reasonable. Telephone Nicollet 1160 for full information.

POSITION WANTED

An experienced nurse wants a position as an assistant superintendent of a small hospital or as a surgical nurse. Good references given. Address 109, care of this office.

PRACTICE FOR SALE

A \$7,000 medical and surgical practice in Minneapolis for sale at a nominal price. Must sell at once, as I am leaving the city. Office in one of the best buildings in the city. Address 101, care of this office.

POSITION WANTED

A graduate of an A-1 school, having completed internship at the Minneapolis City Hospital, desires a position with a Twin City physician. Has had 18 months' experience as assistant city physician. Scandinavian. Address 103, care of this office.

LOCUM TENENS WANTED

By February 1, for two or three months, in a general and surgical practice, with a six-bed hospital, in an excellent town of 900 in northern Minnesota. Privilege of buying. References required. Scandinavian preferred. Address 108, care of this office.

A SPLENDID OPENING

There is an excellent opening in a fine village near the Twin Cities for a high-grade physician who can do some surgical work. A man under forty is preferred. A splendidly equipped office is ready for him. There is nothing to sell; simply the right man is wanted. Address 107, care of this office.

EXCELLENT OPENING FOR A PHYSICIAN

A splendid opening for a physician in best city of Central North Dakota. Hospital facilities, educational facilities, large tributary territory and in fact every condition exists here which may be desired including an ideally situated office. For particulars address, P. O. Box L, Jamestown, N. D.

OFFICE FOR RENT

Over ten per cent of the physicians of Minneapolis have been called to war. This has left many vacant offices, many of them in central locations, making an opportunity for physicians and dentists in outside locations to come to the center. The Pillsbury building, Sixth and Nicollet, is in the heart of Minneapolis, and offers some excellent space in single, double, or en suite.

SANITARIUM FOR SALE

Excellent lake shore sanitarium site with a fifteen room main building and seven cottages, together with all other necessary outbuildings, beautifully situated on 70 acres of wooded land. Located in the heart of the pines, within convenient distance of the Twin Cities, and close to railway station and town. Splendid macadamized road to property. Will make a very interesting proposition of sale or exchange on this property. Ask for Mr. W. E. Wakeman, Thorpe Bros., 206 Andrus Building, Minneapolis, Minn.

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles &	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Ada	1,253	1,432	2			1												
Albert Lea	4,500	6,192	8															4
Alexandria	2,681	3,001	2	1														
Anoka	5,769	3,972	2															
Austin	5,474	6,960	2															
Barnesville	1,326	1,353	0															
Bemidji	2,183	5,099	3	1												1		
Benson	1,525	1,677	1	1														
Blue Earth	2,900	2,319	1															
Brainerd	7,524	8,526	10	1			1								1	1		
Breckenridge	1,282	1,840	1															1
Canby	1,100	1,528	3	1	1													1
Cannon Falls	1,239	1,385	1															
Chaska	2,165	2,050	0															
Chatfield	1,426	1,226	1															
Cloquet	3,074	7,031	4														2	
Crookston	5,359	7,559	6	1											1	1		
Dawson	962	1,318	0															
Detroit	2,060	2,807	3															
Duluth	52,968	78,466	74	10	2	9	3							2	4	2		2
East Grand Forks	2,077	2,533	3		1													
Ely	2,572	3,572	2													1		
Eveleth	2,752	7,036	6															3
Fairmont	3,440	2,958	1															
Faribault	7,868	9,001	8				1									1		
Fergus Falls	6,072	6,887	11	1	1									1		2		
Glencoe	1,788	1,788	2			1												
Glenwood	1,116	2,161	2															
Granite Falls	1,454	1,454	1															
Hastings	3,811	3,983	5			1										1		
Hutchinson	2,495	2,368	2													1		1
International Falls		1,487	1															
Jordan	1,270	1,151	1															
Lake City	3,142	3,142	6													1		
Le Sueur	1,937	1,755	0															
Little Falls	5,774	6,078	11													1		1
Luverne	2,223	2,540	3													1		
Madison	1,236	1,811	2															
Mankato	10,559	10,365	18		2	1								1	1	5	1	1
Marshall	2,088	2,152	3													2		
Melrose	591	2,591	1															
Minneapolis	20,718	201,408	334	39	8	20	9	1			1		4	3	9	30	2	16
Montevideo	2,146	3,056	3			1												
Montgomery	979	1,267	0															
Moorhead	3,730	4,840	3												1			
Morris	1,934	1,685	0															
New Prague	1,228	1,554	2	1														
New Ulm	5,403	5,648	8													1		
Northfield	3,210	3,215	0															
Ortonville	1,247	1,774	1															
Owatonna	5,561	5,658	8												1	2		
Pipestone	2,536	2,475	0															
Red Lake Falls	1,666	1,666	2			1												
Red Wing	7,525	9,048	11			1					1					2		1
Redwood Falls	1,661	1,666	3															
Renville	1,075	1,182	1															
Rochester	6,843	7,844	51	2	3	1										11		1
Rushford	1,100	1,011	1															
St. Charles	1,304	1,159	0															
St. Cloud	8,663	10,600	13	2			1									2		1
St. James	2,102	2,102	3			2												
St. Paul	163,632	214,744	207	11	2	15	4	2					1	1	8	21	1	19
St. Peter	4,302	4,176	1															
Sauk Centre	2,154	2,154	1	1												1		
Shakopee	2,046	2,302	3			1												
Sleepy Eye	2,046	2,247	1															
South St. Paul	2,322	4,510	5															
Staples	1,504	2,558	1															1
Stillwater	12,318	10,198	6															
Thief River Falls	1,819	3,174	3			1												
Tower	1,111	1,111	0															
Tracy	1,911	1,826	0															
Two Harbors	3,278	4,990	3		1													
Virginia	2,962	10,473	18			2									1	3	1	3
Wabasha	2,622	2,622	3															
Warren	1,276	1,613	3															1
Waseca	3,103	3,054	3													1		
Waterville	1,260	1,273	3													2		
West St. Paul	1,830	2,660	0															
Willmar	3,409	4,135	4													1		1
Winona	19,714	18,583	22	3	1	1	1								6			
Winthrop	813	1,043	1															
Worthington	2,386	2,385	1															

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Aitkin	1,719	1,638	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Akeley	1,184	1,221	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Appleton	1,121	1,204	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Belle Plaine	1,121	1,690	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Biwabik	721	1,377	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bovey	1,040	1,058	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Browns Valley	1,175	1,227	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Buffalo	1,175	1,372	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Caledonia	546	1,201	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cass Lake	967	7,684	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chisholm	733	1,613	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Coleraine	1,031	1,031	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Delano	1,024	1,024	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Farmington	864	1,055	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fosston	1,000	1,645	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Frazee	1,428	2,239	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand Rapids	2,481	8,832	11	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1
Hibbing	1,756	1,907	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Jackson	1,254	1,173	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Janesville	1,202	1,237	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Kenyon	1,215	1,038	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lake Crystal	2,280	2,333	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Litchfield	1,385	1,250	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Long Prairie	1,272	1,273	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Madelia	1,204	1,102	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Milaca	959	1,081	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mountain Lake	939	2,080	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nashwauk	1,110	1,279	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
North Mankato	917	1,404	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
North St. Paul	1,313	1,013	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Osakis	1,033	1,850	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Park Rapids	1,032	1,019	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pelican Rapids	1,182	1,376	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Perham	993	1,258	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pine City	1,038	1,175	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Plainview	1,278	1,193	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Preston	1,319	1,555	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Princeton	1,325	1,743	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
St. Louis Park	1,189	1,818	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sandstone	1,391	1,745	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sauk Rapids	1,422	1,343	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
South Stillwater	1,511	1,482	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Springfield	1,770	1,817	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Spring Valley	1,520	1,820	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wadena	2,017	1,755	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wells	2,250	3,022	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
West Minneapolis	1,132	1,300	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wheaton	1,288	1,505	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
White Bear Lake	1,944	1,749	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Windom	1,816	2,555	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Winnebago City	1,119	1,138	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Zumbrota																		

STATE INSTITUTIONS

Anoka, Asylum	3	-3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Faribault, School for Blind	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Faribault, School for Deaf	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Faribault, School for Feeble Minded	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fergus Falls, Hospital for Insane	11	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hastings, Asylum	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Minneapolis, Soldiers' Home	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Owatonna, School for Dependents	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Red Wing, State Training School	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rochester, Hospital for Insane	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sauk Centre, Home School for Girls	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Peter, Hospital for Insane	11	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Cloud, State Reformatory	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stillwater, State Prison	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

OTHER PARTS OF STATE

676	34	10	37	13	4	...	...	...	...	4	1	0	2	39	50	2	71
1763	123	34	102	33	7	...	...	...	...	6	1	5	13	71	164	6	136

Total for state

*No report received. REGISTRAR not doing his duty.

133 stillbirths not included in above totals.

Minneapolis Clinical Laboratory

Oldest in the Northwest

N. W. Nic. 3690 410 Syndicate Bldg. T. S. 33 117

We make Auto vaccines from discharges
or the blood

Wassermann Test - - - \$5.00

Serum Test for Gonorrhea, \$5.00

Serum Test for Tuberculosis, \$5.00

HENRY L. ULRICH, M.D., Director

Private Maternity Home

For Women before and during
Confinement.

Infants cared for. Physicians and Nurses in
attendance.

Good References Given.

MRS. J. W. MOREY

2014 26th Ave. So.,

MINNEAPOLIS, MINN.

Use Vaccines in Acute Infections

The early administration of Sherman's Bacterial Vaccines will reduce the average course of acute infections like Pneumonia, Broncho-pneumonia, Sepsis, Erysipelas, Mastoiditis, Rheumatic Fever, Colds, Bronchitis, etc., to less than one-third the usual course of such infectious diseases, with a proportionate reduction of the mortality rate.

Sherman's Bacterial Vaccines are prepared in our specially constructed Laboratories, devoted exclusively to the manufacture of these preparations and are marketed in standardized suspensions.

Write for Literature.



G.H. SHERMAN, M.D.
Detroit, Mich.
U.S.A.

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY
AND PROMPTNESS ARE OUR
CHIEF AIMS. Send to our nearest
laboratory for fee list and containers
with instructions for collecting all
specimens. These containers will be
sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses
of tissues removed at operation should be part
of the clinical record of all patients.

Autogenous Vaccines . . \$5.00

We culture all specimens aerobically and
aerobically and isolate the offending organ-
isms. Pipettes for collecting material for auto-
genous vaccines sent upon request.

Wassermann Test, Blood or

Spinal Fluid \$5.00

We do the classical test. Any of the various
modifications will be made upon request without
additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

PUBLISHER'S DEPARTMENT

PURE MILK

The milk problem is perhaps the greatest problem in city life. The distribution of a city's milk is the crux of the problem. Upon its solution depends the health of a large percentage of the city's population.

In Minneapolis the principal distributor of milk is the Metropolitan Milk Company, the quality of whose milk has never been questioned, which means that its milk is always free from contamination, which is a high commendation of this company.

Its milk is good for the well and the sick, and deserves to be specified by physicians.

CELLO SILK

Cello Silk is a modern surgical dressing that has met with great favor among surgeons. It comes in sheets 18x36 inches, or in rolls 12 feet long and of different widths. It is transparent, very flexible, and waterproof, readily sterilized by boiling, and is applied to open wounds to prevent bandages from sticking. It is particularly useful for application over skin grafts. It is much superior to oiled silk and rubber tissue.

It is manufactured by Messrs. G. W. Brady & Co., of Chicago, who will send free samples to physicians.

THE POTTENGER SANATORIUM

It is a real pleasure to call the attention of our readers to such an institution as the above, for it is a sanatorium where work is done that ranks with the best work of like character in the world.

The sanatorium is ideally located, being in the foothills of the mountains overlooking the ocean and a short distance from Los Angeles. It is surrounded by orange groves, and has an excellent climate all the year around. Its housing accommodations leave nothing to be desired.

Its conductors are experts in the treatment of tuberculosis who are known in all parts of the world—and its rates are reasonable.

SURGICAL CATGUT

It is no exaggeration to say that every inch of ligature used by a surgeon has depending upon it, in some measure, the surgeon's success and the patient's comfort, if no more, at that point. Every such inch should be an inch of *perfect*, not simply *excellent*, material; and perfection of material of this kind is obtained by perfection of every detail in its manufacture.

Can such perfection be obtained? It certainly can be with proper supervision, which is best obtained under a high sense of responsibility felt by the manufacturers.

Armour and Company manufacture ligatures under conditions and a sense of responsibility that practically guarantee perfection in such ligature. The physical conditions are known to all: material in the greatest abundance, the best equipment obtainable, and the best scientific management obtainable.

Armour's Sterilized Ligatures are dependable at every point, and eliminate anxiety from every source on the part of their users.

MELLIN'S FOOD

When an artificial food is necessary for infants, mother's milk being unobtainable, in whole or in part, physicians should not forget that modern science in food composition has made vast strides within recent years; and the old way of testing by use this food and that, is not justified. The needs of a child's stomach are now known within very narrow limits, and there are artificial foods meeting these needs. High in the rank of such products is Mellin's food.

It is to be said to the credit of the Mellin Food Company that they early recognized the revolution brought about in infant-feeding of artificial foods, especially those composed of cow's milk with added elements essential to the nutrition of infants. And what is true of infant foods is true of foods for the sick and the convalescent, regardless of age.

All these needs are met in large measure by Mellin's Food, and its composition should be familiar to every physician who prescribes a diet for an infant or a sick person.

DR. WEIRICK'S SANITARIUM

This journal is often asked how it gets for its advertising columns the announcements of so many sanatoriums, hospitals, and like institutions. The answer is that it accepts the cards of only high-grade institutions. A specific answer is found in the card of hospitals and sanatoriums in which the treatment of drug addicts is a specialty, for instance, Dr. Weirick's institution at Rockford, Ill.

For many years this admirably conducted sanatorium was carried on by the late Dr. Broughton, with Dr. Weirick as an associate. The business was conducted honorably and scientifically, with no resort to the money-making practices of the so-called "gold-cure" establishments, the result was the confidence of the medical profession and a high degree of success in actual cures. Financial success crowned this concern, and today the institution has a beautiful equipment in the form of buildings and grounds; and its patronage is from all parts of the country.

Dr. G. A. Weirick, Rockford, Ill., will be glad to give full information to physicians having patients needing treatment in this line.

"RHEUMATISM" AND ATOPHAN

The cause of so-called "rheumatism" has been definitely fixed in infection, but the sources of infection in the body have been found to be so varied that the discovery of the relation of the pains dubbed "rheumatism" to an infection has not greatly helped in the treatment of these pains. And another discovery in this matter has been made, and that is that the salicylates, which have been almost universally prescribed for "rheumatism," not only accomplish nothing in this direction, but raise very great trouble in another, namely, as renal irritants.

Atophan seems to be the best substitute yet found for the salicylates. It relieves the pain and inflammation caused by infection, and thus helps the body to overcome the infective process and restore the equilibrium of the system. It often does this very promptly, and it never produces the ill-effects of the salicylates.

Atophan is made in America, and is distributed exclusively by Schering & Glatz, Inc.

A NUTRITIOUS DESSERT FOR THE FASTIDIOUS PALATE

The sick man craves dainty food, as does the person not really ill, but out of sorts or below par, when the appetite is capricious and rejects the ordinary diet. In this condition, it is advisable to pamper it, for the fact must always be borne in mind that eating without appetite does little good. It is fortunate then that certain articles of diet act as a spur to the appetite, and, besides being wholesome in themselves, render the usual kind of food digestible and palatable.

Gelatine is especially such a food. It is nutritious in itself, and possesses the faculty of saving albumin in the body, which comes to much the same thing as supplying albumin. Furthermore, gelatine acts as a vehicle for the conveyance of other foods in an easily assimilable and nutritious form. Gelatine added to foods which are repugnant by themselves, serves to make them both digestible and palatable. It is, moreover, nowadays employed in the preparation of various recherche dishes, and is very extensively used in the making of attractive and used invalid foods.

Unfortunately, some of the jelly powders on the market are composed of synthetic flavoring powder mixed with gelatine powder, but Jiffy-Jell possesses the

distinctive advantage over such in that the flavors are made from the fruit itself, none being derived from artificial sources. The flavors are consequently exquisite and pure, as well as being abundant and diverse. The flavors are carefully sealed in glass vials, so that they are constant.

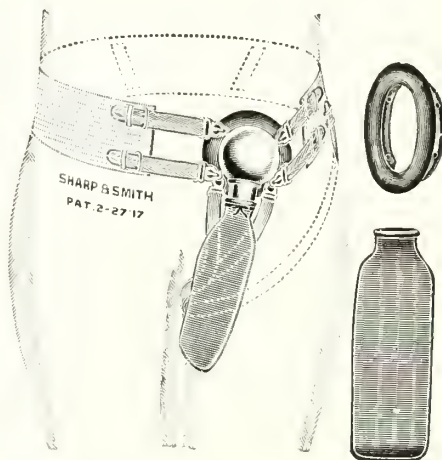
Mr. Otis E. Glidden, the general manager of the Waukesha Pure Food Company, which manufactures the Jiffy-Jell, has made an intensive study of the subject and the outcome of his investigations has been to produce pure fruit flavors of every description, including pineapple, a result never attained before. And a specialty has been made of mint flavor, which is novel and has proved extremely popular for garnishes, relishes, or for making salads.

The outstanding features of Jiffy-Jell are that it comprises the nutritious properties of gelatine with the flavor of pure fruits; consequently, it easily transcends products in which the flavors are procured by synthetic processes, because it is a natural product and therefore more healthful and is superior in flavor. In short, it is economical, healthful, and in particular appeals to the epicurean appetite. Its flavoring supremacy for desserts, salads and garnishes is unquestioned, as it is the true essence of fresh fruit.

TRADE
SANDS
MARK

Colostomy Cup and Belt

PRICE
\$25.00



THE cup is made of brass, heavily nicked, and has a large outlet to which is attached a rubber bag; around edge of cup is placed an inflated ring so that it fits perfectly to the body. All parts are made so they can be readily taken apart for cleansing or repairs.

Extra parts for this apparatus can be furnished at all times.

When ordering give measurements on line of opening

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

155-7 N. Michigan Blvd., CHICAGO, ILL.

Discount on Above
Outfit
To Physicians

Established 1844
Incorporated 1904

Two Doors North of Randolph St

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, FEBRUARY 1, 1918

No. 3

THE TREATMENT OF WOUNDS IN CIVIL LIFE AS APPLIED IN MODERN WARFARE*

BY ARTHUR E. BENJAMIN, M. D.
MINNEAPOLIS

The application of some of the newer methods in the treatment of war wounds has been made by the writer to wounds, ulcers, infected areas, etc., in civil practice to determine the relative value of these methods as compared with the methods employed heretofore.

The profession should be encouraged to try out these newer methods in civil practice so that we may the sooner either adopt them, if superior, or discard them, if not so.

The present war was begun on so large a scale that the surgeons with the Allies were unprepared to cope with the wounds and diseases as the result of the fighting. The high-power guns, enormous shells, hand grenades, shrapnel, machine guns and rifle bullets, bombs, liquid fire, poisonous gases, etc., have produced a variety of injuries, and brought about complications with which most surgeons were unfamiliar; consequently the mortality-rate was at first high, and the final results in cases recovering more or less uncertain.

When the war first started the facilities for caring for the wounded were far from adequate, many injured soldiers not receiving attention for days. The wounds were usually infected. The men were so exhausted that the resistance was subnormal, and complications, such as gas gangrene and tetanus, were not uncommon. At pres-

ent the transportation facilities are very good, consequently early attention is given the wounded. Dressing stations are located near the firing line so that any infection that may have occurred can often be counteracted early by proper antiseptics.

Transfer stations and base hospitals are now provided so that the wounded soldier in his trip back from the trenches after his injury receives frequent and adequate treatment, the injured tissues being kept well bathed in mild antiseptic remedies to retard the growth of the bacteria.

Thus the theory of Lister seems to have again engaged the attention of surgeons, and the use of antiseptics has been encouraged.

The universal and early use of antitetanic serum in all the wounded cases is now practiced, which has almost eliminated tetanus as a complication.

The character of the wounds, and the location of the battle fronts, whether in untilled or well-fertilized areas, determine to a great extent the nature of the subsequent infection and progress of the case.

Baron Larrey, in the treatment of wounds during the Napoleonic war, practiced excision of all diseased or devitalized tissue with very good results. Many surgeons of experience in civil life had learned previous to our present war that all wounds in which devitalized tissue was present progressed more favorably when the destroyed

*Read before the Southern Minnesota Medical Association November 27, 1917.

parts were removed and drainage established. They also knew that the sooner surgical attention was given a wound after an injury the less likely would infection occur and healing would be more prompt. Infection in any locality or tissue had been treated by good and sufficient drainage, and lessened local tension provided, thereby minimizing infection of both contiguous and more distant areas.

For many years surgeons have used salt solution, alcohol, boric acid, or a combination of antiseptics as wet dressing in infected wounds, favoring drainage of deep cavities by position and gravity. They have employed more or less continuous irrigation of some infected areas, or, in chronic sinuses have employed Beck's bismuth paste, Moorhoff's bone-wax, or the blood-clot to shorten the course of the disease and favor closure, as "Bipp" is now employed by Morrison.

Certain well-founded and generally endorsed methods in the treatment of wounds, are followed by nearly all surgeons with the Allied armies now, they agree that—

1. A wound must be treated early by applying some mild antiseptic.
2. All devitalized tissue should be removed from the vicinity of the wound.
3. All foreign substances, as a rule, must be extracted.
4. Thorough drainage must be established.
5. Immobilization of the parts affected must be provided.

When these points are understood and heeded it has been found that most wounds heal readily.

Tetanus.—All wounded cases of the Allies in which there is an abrasion of the skin, are given a prophylactic dose of antitetanic serum of 250 to 500 units.

Ashurst and John, in the *American Journal of Medical Sciences*, June, 1913, report 435 cases of tetanus from 1897 to 1911 with a mortality of 60 per cent. In the Civil War the mortality was 89.3 per cent. In the Franco-Prussian War it was 90 per cent. There is one peculiarity of this infection, however, that has been observed by a few surgeons, namely, the unusual length of time that micro-organisms may remain in the tissues after healing seems complete, which later may cause acute tetanus symptoms. It has been noted, even in trivial injuries and operations, and may be termed *delayed tetanus*. Bowling reports one case in which tetanus set in seventy-three days after the injury was received; and gas gan-

grene supervened forty-two days after the wound was healed, causing the death. A warning of the possible tetanus infection is noticed in the rigidity and hardness of the tissues and muscles of the injured limb and side. These symptoms should call for the administration of serum at once.

The report of the British War medical board in the *British Medical Journal*, November 11, 1916, emphasized the necessity of several successive protective doses of serum. The primary dose is given in the dressing stations. The second dose is given seven days after the first. In long-continued septic wounds the third and fourth doses at seven-day intervals are recommended. When operations are to be performed at the site of a wound, or even near a wound, a prophylactic injection of serum is advocated. When such operations are performed seven days subsequent to the last injection, the prophylactic or precautionary serum of 500 units should be given two days previous to the operation. The antiseptics that should be used as prophylactics of tetanus are hydrogen peroxide, potassium permanganate, chlorine water, or a solution of iodine.

The British War office committee on the study of tetanus have issued a memorandum on tetanus, and in their report they emphasize the value of treatment depending upon antitetanic serum almost exclusively. They advocate about 3,000 units, given intraspinaly and given very slowly, and at the same time 5,000 to 10,000 units intramuscularly, and 5,000 units subcutaneously. These injections are given daily for three to five days. When the disease shows signs of abating the amount is lessened and the intervals between the doses are lengthened.

The value of the magnesium sulphate in this disease is doubted by the war surgeons, although Dr. F. J. Meltzer depends largely upon this drug in civil practice, especially to reduce the spasms.

The writer has an intimate knowledge of three recent cases (one of his own) in which the serum and magnesium sulphate were used in conjunction. Two of the patients were adults and one a child; and all three recovered.

My own case was that of a Finlander, aged 29, who worked in an elevator. He began to develop mild tetanus symptoms ten days after an injury, by a cable, to one of his fingers. He was then given antitetanic serum. From September 30, 1917, to October 10, 1917, he received 267,500

units, being given intravenously, intramuscularly, and intraspinaly.

He was given, internally, magnesium sulphate to keep the bowels active, and 25 per cent solution of magnesium sulphate hypodermically in quantities ranging from 6 to 90 c.c. frequently for nineteen days, the amount being regulated by the symptoms present.

His temperature ranged from 100° to 104° for about six days.

He was given a few hypodermics of morphine and atropine during the spasms, atropine alone a few times and sodium bromide for several days, all to arrest the spasms and lessen the rigidity of the muscles.

The patient left the hospital on the 23d of October, having had but two tonic spasms, although his neck, jaws, and back remained stiff for about three weeks. At the present time he is well.

The result obtained by prophylactic treatment in the present war should encourage all physicians and surgeons to adopt the use of antitetanic serum in each injury in which there is produced a rent in the skin.

Gas Infection and Gas Gangrene.—Gas bacillus infection was very common in the early months of the war, owing to the nature of the soil in which trench warfare occurred and the delay in caring for the wounded, the gas bacillus of Welch being found in nearly all cases. Some surgeons went through the Civil War without seeing a case of gas gangrene. It seems to have been on the increase in civil practice up to the present war. There are other gas-producing bacteria, besides that of Welch, found in many of these cases. The disease develops very rapidly, as a rule, after the first six or eight hours, up to that time few bacteria may be found. By twelve hours, however, the anaërobic bacilli have multiplied tremendously, and death may result inside of sixteen to twenty-four hours. On the other hand a patient may live several days, and even recover under proper treatment.

Anthony A. Bowlby believes that "in a majority of all lacerated wounds gas will result if they are left long undressed."

Depage has treated many gas cases by the injection of oxygen with excellent results.

Delayed gas infection is not an unknown condition.

If this disease is to be prevented we must treat the wounds early by proper antiseptics and dressings. Every hour may bring added danger to the patient. It is necessary thoroughly to de-

stroy the bacilli, to remove all necrotic tissue favoring their growth, and to relieve mechanical pressure.

An x-ray will frequently reveal the extent of the involvement of the disease as in a case which the writer has now under treatment.



Fracture of the tibia and fibula with gas areas in the soft structures.

The history in brief is as follows:

Mr. E. K., a drainage contractor, aged 47.

While in a twenty-foot tile ditch a lump of clay fell on his right leg crushing and breaking it, resulting in a comminuted fracture in the upper part of the left leg (tibia and fibula), but no abrasion or break in the skin was noted.

The patient, four days after the injury showed marked swelling, edema, and discoloration and tension of the skin. It was at this time the writer first saw the patient at his home in the country, and advised multiple incisions to relieve tension, but no gas-bacillus infection was apparent at the time. On the fifth day there was some evidence of its presence, and on the sixth day, when he arrived at the hospital, it was marked, extending nearly to the hip. The limb was quite dark with gas bubbling from the incision. The x-ray shows gas cavities between the muscles and fascia very plainly and distinctly marked.

The bacteriological examination showed streptococci, staphylococci, and Welch's bacillus. An amputation was decided upon. Gas and ether anesthesia was employed. Potassium permanganate and hydrogen peroxide were injected beneath the skin in several separate places above the knee where there was gas. The bursa above the patella contained about six ounces of thick, infected blood. The skin was incised below the patella, and the

joint opened; there was no bleeding until the popliteal artery was severed. A thrombosis of the vein was present. The joint surfaces were discolored, and showed signs of infection; but there was no free pus. The patella was removed with the leg, and the stump was left open. Numerous incisions were made above the knee through the skin and fascia into the soft structures. Tubes were placed from one incision to another. The wound was surrounded by alcohol gauze packs, and, later, was treated by the use of pads saturated with Dakin's solution, and the wound was irrigated with the same solution.

The patient's temperature was 99° most of the time, and on the eighth day after arriving at the hospital it was 101°, but gradually subsided and remained at 99°.

The case was unique on account of no apparent abrasion. The patient has made very satisfactory progress, and, as the amputation was at the knee-joint, to avoid unnecessary injury or shock, a re-amputation is contemplated in the near future to obtain a desirable stump.

An antitoxin for this disease has apparently been discovered by Dr. Bull, of the Rockefeller Institute. If this serum proves to be as efficacious as the antitetanic serum in tetanus we may be able to eliminate this most destructive disease.

The writer's case, as well as those treated in Europe, argues for prophylactic local treatment and an early diagnosis of the gas-bacillus invasion by the x-ray and other means with immediate amputation in cases where delay is dangerous.

Abdominal Wounds.—In the Boer War it was not the custom to operate immediately on bullet wounds of the abdomen unless there was evidence of hemorrhage or positive visceral lesion. The small jacketed bullet often passed into the abdominal cavity without wounding important structures. The bombs, grenades, and high-explosive shells used in the present war have compelled surgeons to operate in nearly every case. It is the rule to operate unless there is good reason to believe the viscera have not been wounded. Emphasis is, however, placed upon early operation.

Wallace, Hughes, and Reese, in the *London Lancet* of April 28, 1917, report in 43 cases operated on within the first six hours 62.8 per cent of recoveries; within six to twelve hours, 32 cases with 3.62 per cent of recoveries; within from twelve to sixteen hours in 18 cases 16.6 per cent of recoveries; and after twenty-four hours 11 cases with 45.5 per cent of recoveries. Gentleness and care have been found quite necessary in handling the intestine.

Fraser and Drummond state that the only wounds warranting resection are those with extensive damage to the mesentery. They, as well

as many other surgeons at the front, prefer to suture the wound in the intestine. This rule should govern our actions in civil practice.

There is some controversy as to which is better, end-to-end or side-to-side anastomosis. To empty the bowel from above the anastomosis by milking the contents out has been found very advantageous. In this way post-operative paralysis and distention are usually avoided. Drainage of the abdominal wound, especially where operations have been late and when infection has positively occurred, is necessary.

Bowlby gives the following table of results in 1,038 cases treated in eighteen months:

Considered with view to operation.....	1,038
No operation advised	73
Total operations	965
Total operative mortality	53.9 per cent
Total hollow viscera mortality..	64.7 per cent
Stomach mortality	52.7 per cent
Small-gut mortality	65.8 per cent
Colon mortality	58.7 per cent

Kidney.—It has not been found necessary to remove a kidney in every instance where it has been wounded. Part of the kidney may be destroyed, but, if the blood supply is evident, it may be saved.

Cuthbert Wallace reports in the *British Journal of Surgery* for April, 1917, a study of 1,200 cases of gun-shot wounds of the abdomen. He states that it is an essential factor in the treatment of injuries of the abdomen, and has been demonstrated that an early operation gives the lowest mortality-rate.

The report of these cases is very interesting and exhaustive, and he comes to the following conclusions:

1. Abdominal wounds complicated by severe intra-abdominal hemorrhage should be operated upon immediately, and much nearer to the firing line than the casualty clearing station. An advanced dressing station, or dugout still nearer the line, has proved quite satisfactory. They should not be subjected to motor transport until hemorrhage has been arrested (the same principle applies to badly torn limbs and hemorrhage from large arteries).

2. Other abdominal injuries, involving hollow viscera, do not, if kept quiet, exhibit symptoms of shock for a long time. Even in most severe and fatal wounds involving complete prolapse of viscera, shock has been delayed for as long as twenty-five minutes, and has only set in after the necessary dressing of the wound.

3. It is possible that in wounds of the abdomen involving the gut, peristalsis is temporarily arrested, but can be excited by shaking, occasioned by motor transport to a clearing station. Hence cases which have been kept quiet for some hours and given morphia and saline prior to the journey, are better prepared in every way

to undergo operation if this be necessary. Subcutaneous saline acts as a diuretic, and gets rid of fatigue products.

4. Rest previous to a motor journey is still more important if the viscus is injured during active digestion, to avoid extensive extravasation and hemorrhage. If kept quiet, omentum and peritoneum are rapidly active, and in a few hours the dangerous area is shut off.

5. The indications for immediate operation on arrival at a clearing station are persistent vomiting of a greenish-yellow material, increase in pulse-rate, retracted rigid abdomen, and general abdominal tenderness. If these symptoms are not present it is wiser to wait.

6. Should improvement begin to show itself with waiting, vomiting setting in after forty-eight hours, or perhaps earlier, should be watched for. It is about this time that a fecal fistula may develop.

7. Vomiting at the end of forty-eight hours may be obstructive, and due to scybala or plastic peritonitis, more often the former. Enemata, given frequently, will tend to relieve the vomiting due to scybala. It may be toxic, and due to serious infection carried in by the missile. Obstruction vomiting is accompanied by distention.

8. Operation should be performed as rapidly as possible, and every use made of omentum to repair the damage to the intestine. Multiple suture of the holes in the gut has proved more satisfactory than resection and anastomosis.

9. Peritoneal lavage has not been practiced, and ether, 3 oz., left in the peritoneal cavity after operation has had a beneficial effect in preventing post-operative intestinal inertia.

10. Closing the abdominal wall with through-and-through sutures of silkworm gut, and inclusion of rubber tubes, has given the best results, and these wounds have not become complicated by serious infection.

11. After-treatment aims at the prevention of obstruction and of post-operative intestinal inertia. Frequent enemata, gastric lavage, subcutaneous saline, bismuth carb., gr. x, t. d. s., with sips of water, and with this eserine salicylate, gr. $\frac{1}{100}$ subcutaneously, three doses at intervals of an hour, have proved most satisfactory.

12. For serious wounds of the rectum and buttocks, colotomy is recommended with washing through of the lower portion of the gut.

13. Moribund cases, and cases obviously unfit to stand laparotomy were left alone.

Many of these rules might well be adopted in the treatment of the injured in large industrial centers or of accidental gun-shot wounds in civil practice.

The writer believes local stations near industrial centers should be provided in our large cities to care for accident cases, in particular, near the place of injury and not disturbed by a long ambulance journey to a hospital.

Fracture.—The treatment of fractures has been somewhat simplified during the present war. The wire splints that are used and recommend-

ed by Mr. Pringle, especially for gun-shot wounds, are simple, easily constructed, light, durable, and readily adjusted.

Tuffier states in the *Pennsylvania Medical Journal* of June, 1917, that 80 per cent of the amputations are due to infection and 20 per cent to destruction of tissue. He is confident that, if Carrel's method is followed, almost all amputations due to infection can be prevented.

If it is necessary to amputate for loss of substance, a chop or guillotine aperiosteal operation is the method of choice. This is to be followed by Carrel's method of wound-sterilization.

Carrel and Chutro are of the opinion that 95 to 98 per cent of secondary hemorrhage is the result of infection. Secondary hemorrhage rarely occurs in a case where Dakin's solution is used in the beginning, thereby aborting infection. Secondary hemorrhage occurs frequently in all hospitals where infection is rampant.

Unless badly infected all spicula of bones should be preserved, in order to favor the re-establishment of the shaft, and provide a useful limb. All fractures should be x-rayed, set and immobilized completely. The immobilization lessens the probability of infection in compound fractures.

Major Sinclair has adopted a glue for use in applying extension in fractures which has been found economical and non-irritating. The formula is as follows:

Isinglass	50 parts
Glue	50 parts
Water	50 parts
Glycerine	2 parts
Calcium chloride	2 parts
Tannic acid	12 parts
Thymol	1 part

Face Wounds.—The number of injuries of the head, face, and skull received during this war and demanding repair, and the much plastic work that will be done as time goes on, will demonstrate certain principles upon which future surgery of this part of the body will be founded. The good results that are being obtained are evidenced in the appearance of innumerable cases in which this plastic and repair work has been done satisfactorily. Some of the men give little outward evidence of the mutilation or of the severe injuries that they have received. It is quite necessary for the dentist and surgeon to co-operate in cases where there is involvement of the jaw. Major A. C. Valadier says that whoever practices plastic facial work would do well not

to adhere implicitly to text-book directions; and he cites illustrations of this point as follows:

The time which should elapse between successive steps of surgical procedure can only be ascertained by experience. In general, it may be said that the primary closure of the wounds is undertaken too late and all subsequent stages too early. In particular, transplanted flaps can rarely be divided safely after ten or fourteen days, as often stated; three weeks is as a rule a minimum.

The margin allowed for shrinkage of flaps is commonly given as one-sixth of the area. In our experience, one-third is more accurate; that is, a piece of soft tissue should be cut one-third larger than it is ultimately intended to be. It must be remembered that the flap continues to shrink for many weeks, and in all diameters. Thus a nose made from the frontal tissues shrinks upward towards its pedicle, so as to lie too high on the face; and the piece fashioned from the columella may shrink until it is not long enough to reach the lip.

Destruction by an extensive wound of the facial nerve in the parotid region. Those who, like myself, have anastomosed the nerve with one of its neighbors, will agree that a completely successful result of this operation is rare. Here, again, it is better to lift the mouth angle by a plastic operation. The mouth in repose is then absolutely straight, and the patient's only obvious disability is a whimsically crooked smile.

Various Methods and Remedies for Wound Treatment.—Rutherford Morison, in the treatment of wounds, applies what he has termed "Bipp" (one part bismuth, two parts iodoform, and paraffine, q.s.). Very small quantities of this are smeared over the raw surfaces.

Moynihan, in discussing the efficacy of "Bipp" with the originator, requested Dr. Morison to treat a few cases without the use of "Bipp," to see if the results would not be as good after following the usual plan associated with the treatment of all wounds. The results seemed to bear out the opinion of Moynihan, as the cases so treated proceeded to recover in the same length of time as with "Bipp," although Dr. Morison stated he would still pin his faith to "Bipp." His method is similar to the treatment which many of us have used in the application of bismuth paste, scarlet red, etc., to wounds, sinuses, etc.

The Saline Treatment.—The saline idea is not new. A solution of sodium chloride and citrate was in use at the Boston City Hospital in 1907, having been introduced there by Crandon. In 1902 Sondeman used a 2 per cent bleaching-powder solution on leg ulcers. The practice there was to keep the dressings moistened with the solution by pouring it on every two hours or as often as necessary. However, it has never been widely used in America. The chlorinated soda solution known as Labarraque's has been used

more or less indifferently by many surgeons for a number of years.

The well-known wet dressing idea for infections has heretofore never taken into account the character of the solution employed for the wetting, nor the necessity of reaching the remotest recesses of the wound. The indifference to these points in technique of the preparation and application is undoubtedly responsible for the indifferent results. The writer has used an antiseptic or salt solution on mildly infected wounds for years with gratifying results.

Sir Almroth E. Wright states that, in nearly all treatments of wounds in which he employed nearly the normal proportions of salt solution, it depends more upon the sound surgical principles and painstaking dressings than upon any peculiarities of the solution employed.

Dr. William Arthur Clark's practical summary of Wright's work is as follows: When a wound is bathed in all its recesses with a hypertonic salt solution, it becomes an unfavorable situation for the multiplication of organisms because the salt itself inhibits their growth. And he further says that in certain cases, Wright's method has brought about better results than methods used before the war, but it neither aborts nor controls infection after it has become well established. Of the same writer Moynihan says: "I do not think Wright's method is applicable in the worst cases at least, for, as I have said, the condition of the soldiers who have received severe wounds, is one of exhaustion, with lowered blood-pressure, cold extremities, feeble pulse, and marked pallor. A few patients need infusion before any remedial measures can be attempted, and very many suffer from shock in greater or less degree."

Acriflavine.—Mr. C. J. Bond recommends the use of acriflavine in the form of a cream or paste. Others have great praise for this newer remedy.

Ether.—A. Distaso and T. R. Bowen recommend the use of the ether solution and conclude that "it can, therefore, be fairly deduced that the discharge of the patients from the hospital is materially accelerated by the use of the ether method, on account of its comparatively rapid healing power."

Wm. Pearson also endorses ether for combating infection. The writer has used it in a number of infected wounds, but with uncertain results.

Carrel's Method of Wound-Sterilization.—

Carrel with Dakin's assistance endeavored to find some solution which would be mildly antiseptic, and non-irritating when kept in close, continuous contact with the infected tissue and capable of destroying pathological organisms; also one that would be harmless to normal tissue, painless, non-toxic, chemically stable, easily obtainable, and inexpensive. Sodium hypochlorite solution seemed the only one that met all these indications which experiments and clinical experience seemed to them to have verified.

Dr. Lawrence says:

"The great advantage of the Carrel method of treating infected wounds may be summed up as follows: It successfully checks the extension of the infection, causes an almost immediate drop of temperature, and brings comfort to the patient. Pus is eliminated and dressing simplified. An early opportunity is given for surgical repair work. The production of cicatricial tissue is minimized, and the interference with function of the part is less after the recovery of the patient. Finally, it is a scientific and intelligent method of observing the process of healing in wounds and determining the efficacy of treatment."

"The rapid disappearance of all pus, necrotic, dead, or decomposed material within five to seven days, is the most remarkable effect produced by the Dakin solution. The granulations take on a healthy glow, resembling very much the gross appearance of beefsteak; no other wounds or granulations present a similar appearance. As the infection is brought under control, the discharge becomes clean and free from odors. The question that naturally arises is, Can the same result be brought about by Carrel's technique with antiseptics other than Dakin's solution? Depage has shown beyond any question of a doubt that certain recessions in the bacterial chart do occur, but that Dakin's solution is the only antiseptic that will keep a wound aseptic and permit suture."

"To be successful, one must follow the technique of Carrel-Dakin, as this solution represents 20 per cent of the cure and the method 80 per cent."

The writer has found it convenient with intelligent persons to instruct them in the regulation of the clamp on the tube so that they could keep the wound bathed in the solution at proper intervals.

The treatment of infected fractures can be similarly carried out with the use of the Carrel-

Dakin method, but it requires a longer time to sterilize the wound, usually taking from fifteen to twenty-five days.

Depage had at one time 80 cases of compound fracture undergoing Carrel-Dakin's treatment, not one of them suppurating.

Some surgeons have even used Dakin's solution to sterilize an infected uterus with success.

By this method we may assist the healing of wounds and tissues which have been found almost impossible to sterilize properly heretofore until nature alone had completed the process, if this remedy proves to be what the originators claim for it. It has been found, however, that this remedy must be begun within the first twenty-four hours always if the infection is to be aborted. Suppuration, however, can be controlled if the focus can be reached. There is no toxic absorption, and, therefore, this solution can be used ad libitum.

The Dakin-Carrel Method.—This method consists in the employment of 5 per cent of the Dakin sodium hypochloride solution according to a special technique devised by Dr. Carrel, which consists of a graduated dark container, a regulating clasp with one or more small perforated tubes, usually surrounded by a specially constructed gauze covering. These tubes, with the covering, are passed into the wound and extending to the bottom so that the fluid may bathe the infected parts thoroughly. The tubes are attached to glass distributing and connecting tubes. The solution is allowed to run into the wound from one to two hours with intervals of about two hours between the treatments. The skin is protected by petrolatum, as the solution is irritating to the skin. Systematic bacteriological examinations of the wound are made from day to day. According to the reports given by many surgeons ordinary wounds in the soft parts are sterilized in from five to eight days, and fractures from two to four weeks, making it possible to close these wounds by suture or to pull them together with adhesive straps when the bacteriological count is found by three or more successive tests to be sterile.

Anthony Bolby is very favorably impressed with Dakin's solution.

Depage and Duffier have employed the solution in wounds of the chest.

No doubt the Carrel-Dakin method is misunderstood by many surgeons, and often improperly applied because of lack of facilities, time,

and help; therefore it is discredited by many, because of the poor results obtained.

Dichlorimine-T.—To treat ordinary wounds and infected surfaces Dichlorimine-T has been proposed by Dakin. It is dissolved in chlorinated eucalyptus and paraffin oils, and is used in two to ten per cent strength.

In the Pennsylvania Hospital a test was made with this after Dakin's method, and in 160 unselected industrial accident cases the patients were discharged in one-third of the ordinary time required by former methods. In 82 similar unselected cases in the same clinic treated by Dichlorimine-T and oil, the patients were discharged in 16.3 per cent less time than under the Dakin-Carrel method.

The writer's experience with Dichlorimine-T has been very satisfactory in leg ulcers, slow granulating wounds, suprapubic cystotomy, sinuses, and superficial abscess cavities.

Chloramine Paste.—Dr. Alexis Carrel and Dr. Alice Hartman recommend the sterilization of certain wounds with chloramine paste. They believe that—

"Under the conditions of our experiments chloramine paste maintains the asepsis of a wound already sterile, and sterilizes an infected wound" and "Under the same conditions chloramine paste causes no apparent modification of the cicatrization curve of an aseptic wound."

Bevan has, on several occasions, protested against the unqualified endorsement by the profession of the Carrel-Dakin method of treatment of wounds, and asserts that the employment of the well-known and effectual method of the treatment of shell and rifle wounds brings the best possible results in 90 per cent of the cases. He believes that the other 10 per cent might well be treated by other tried antiseptics with results equal to those obtained by the Carrel-Dakin method.

James Neff, George Crile, James Briny, Fred Murphy, Joe Blake, Berkly Moynihan, and many others are skeptical as to the practical value of the Dakin-Carrel method.

Bevan believes that the problems of the surgical pathology have been handled in a superficially incomplete way without the necessary control, and he is forced to conclude that Carrel's part of the work is not scientifically proved and cannot be accepted. He predicts that, like Koch's lymph, Bier's hyperemia, and the vaccine therapy for acute infection, the Carrel treatment is due to

have a short period of popularity among a small group of enthusiasts.

Lieutenant Colonel B. J. Freyer, consulting English surgeon, has reviewed tens of thousands of wounds of all types and degrees, and has compared the methods of treatment and results obtained by various surgeons. He is much impressed by the more simple method of treatment of wounds and believes that the employment of the well-recognized forms of treatment that have been employed are best, and will bring about as good results in the end as the more elaborate, untried, and complicated methods. He believes in the thorough mechanical drainage of wounds and in simplicity of technique.

It is impossible at this time to offer positive scientific evidence of the relative value of various forms of treatment. It is not always possible to get similar cases in which to compare the various forms of treatment. It is not possible to say either that certain results could not have been procured by other forms of treatment. Time will settle the question when certain forms become universal.

The following conclusions and rules may be followed in private practice as taken from the experience of surgeons at the front in the methods employed in the treatment of war wounds:

1. Early treatment of the wounds may prevent infection.
2. Mild antiseptics applied to a wound may eliminate or destroy infection already present.
3. Efficient mechanical drainage is necessary for the successful treatment of infection.
4. Drainage must be either by gravity or capillary action, free and unhindered, and in most instances by the use of the rubber tube.
5. Continuous irrigation by mild antiseptics may result in the sterilization of the wound in a shorter time, allowing the wound to be closed early, by either stitches or plaster.
6. When a wound after sterilization cannot conveniently be closed by sutures, adhesive plaster with hooks may be stretched along the margins of the wound, and the parts pulled together gradually by lacing.
7. Rest of the wounded part is essential, and should never be neglected.
8. Wet dressings favor drainage, and prevent the sealing of the wound with dried secretions.
9. Removal of all devitalized tissue should be practiced as a rule.

10. Removal of all foreign substances, when possible and safe, is desirable.
11. Antitetanic serum should be administered to all patients receiving wounds.
12. Individuals receiving abdominal wounds should, in most instances, be allowed to remain quiet for a time.
13. In cases of abdominal hemorrhage or perforation of intestines operation should be done at once.
14. Patients with abdominal wounds should not be transported to distant hospitals, but should be first treated as near the place of injury as possible.
15. Intestinal wounds should be stitched up when possible in preference to making resection.
16. Face wounds involving the jaws should be treated in consultation with a dental surgeon.
17. Pedicles in plastic surgery should be allowed a long time to fix themselves before being severed.
18. An x-ray should be taken of all fractures as soon as possible after injury.
19. Fractures should be immobilized and treated with simple, light splints.
20. Immediate antiseptic treatment of compound-fracture wounds is advisable.
21. Spicula of bone should be saved in clean or mildly infected wounds to bring about less deformity and a restoration of the shaft.
22. Wounds in civil practice may be irrigated with Dakin's or some other mild antiseptic to abort infection or prevent its further development.
23. Dichloramine-T is a convenient and satisfactory way to treat all surface wounds at least.
24. All wounded or injured parts should be completely immobilized as soon as possible after injury.
25. The profession should not endorse some of the present methods of treatment of war wounds and apply them to civil practice until a more thorough investigation of the end-results is made.

BIBLIOGRAPHY

1. Morton, Charles A.: A Lecture on the Treatment of Secondary Hemorrhage, with Special Reference to Gun-Shot Wounds, F. R. C. S., England, *The Lancet*, February 10, 1917.
2. Anderson, Louisa Garrett, M. D., and Chambers, Helen, M. D., London.: The Treatment of Septic Wounds with Bismuth-Iodoform Paraffin Paste. London, *The Lancet*, March 8, 1917.
3. Pearson, William: Important Principles in the Drainage and Treatment of Wounds, F. R. C. S., Ireland, *The Lancet*, March 24, 1917.
4. Williams, Reginald: A Universal Extension-Splint for Gun-Shot Fractures of the Upper Limb, L. R. C. P. & S., Edinburgh, *The Lancet*, July 14, 1917.
5. Bashford, Captain E. F.: Investigation of the Histology of the Tissues, Immediate and Remote from the Point of Injury in Gun-Shot Wounds of the Liver, Spleen, Kidney, Intestines, Blood-Vessels, Subcutaneous Tissue and Aponeurosis, and Muscle, R. A. M. C., *The British Journal of Surgery*, January, 1917.
6. Morison, Rutherford: The Treatment of Infected Suppurating War Wounds. New-Castle-Upon-Tyne, *The British Journal of Surgery*, April, 1917.
7. Wallace, Cuthbert: A Study of 1,200 Cases of Gun-Shot Wounds of the Abdomen, C. M. G., *The British Journal of Surgery*, April, 1917.
8. Pringle, J. Hogarth: Some Splints for the Treatment of Gun-Shot Fractures of the Long Bones, Glasgow, *The British Journal of Surgery*, July, 1917.
9. Barling, Colonel G.: The Carrel Treatment of Wounds, A. M. S., *The British Journal of Surgery*, July, 1917.
10. Kazanjian, Major V. H.: The Treatment of Hemorrhage Caused by Gun-Shot Wounds of the Face and Jaws. Harvard Surgical Unit, and Burrows, Captain Harold: R. A. M. C. (T. F.), *The British Journal of Surgery*, July, 1917.
11. Valadier, Major A. C.: A Report on Oral and Plastic Surgery and on Prosthetic Appliances, C. M. G. R. A. M. C. (T. H. C.), and Whale, Captain H. Lawson: R. A. M. C. (T.).
12. Walker, E. H.: Treatment of Wounds with Bismuth-Iodoform Paraffin Paste. *The British Medical Journal*, July 21, 1917.
13. Sweet, Joshua E.: Dakin's "Dichloramine-T" in the Treatment of the Wounds of War. A. M. M. D., F. A. C. S., *The British Medical Journal*, August 25, 1917.
14. Distaso, A., and Bowen, T. R.: Auto-Disinfection of Wounds by the Use of Ether Solution. *The British Medical Journal*, February 24, 1917.
15. Bond, C. J.: Acriflavine Paste as a Dressing for Infected Wounds. *The British Medical Journal*, July 7, 1917.
16. Clark, Dr. William Arthur: The Saline Treatment of Infected Wounds on the Western Front. *The Military Surgeon*, March, 1917.
17. Arthur, Colonel Wm. H.: Carrel's Method of Wound Sterilization. *The Military Surgeon*, May, 1917.
18. Bull, Carroll G., and Pritchett, Ida W.: Toxin and Antitoxin and Protective Inoculation against *Bacillus Welchii*. *The Journal of Experimental Medicine*, July 1, 1917.
19. Ney, K. Winfield, M. D.: The Influence of the Present War on the Treatment of Infected Wounds. New Orleans, La., *New Orleans Medical and Surgical Journal*, July, 1917.
20. Sherman, William O'Neill, M. D.: The Carrel Method of Wound Sterilization. *The Pennsylvania Medical Journal*, June, 1917.
21. Lawrence, Jos. S.: The Carrel Treatment of Wounds Applied to Civil Practice. A. M. M. D., *Johns Hopkins Bulletin*, September, 1917.
22. Bevan, Arthur T., letter from: The Carrel-Dakin Treatment. *Journal of the American Medical Association*, November 17, 1917.
23. Meltzer, F. J.: Inhibitory Properties of Magnesium Sulphate and Their Therapeutic Application in Tetanus. New York, *Journal of the American Medical Association*, March 25, 1916.
24. Keene, W. W.: Treatment of War Wounds.

OCULAR SYMPTOMS OF BRAIN TUMOR*

BY C. D. CONKEY, M. D.

DULUTH, MINNESOTA

It has been my good fortune during the last two years through the courtesy of my colleagues to see an extensive series of cases that were suffering from some form of brain neoplasm, and I thought it would be of interest to present some of these histories. Before doing so, I wish to review, in brief, the symptomatology of brain tumor, especially from the standpoint of the ophthalmologist and aurist. There are some classical symptoms that are common to all brain tumors, and there are others that are dependent upon the region in which they are located.

To the first group belongs that group of symptoms which, when existing together, are strongly indicative of a brain lesion causing pressure. This group consists of nausea and vomiting, headache, slow pulse, general convulsions, and choked disks. In the great majority of cases this group of symptoms, when existing together, indicates the presence of a new growth, though they may be present in such brain lesions as brain abscess, meningitis, or tubercular deposits. This group is rarely found existing in one case, but some of them are found in all cases. Choked disk is probably the most valuable symptom of brain tumor that exists, and one of the most common. It is estimated to exist in 90 per cent of all cases of brain tumor in some period of its history. It often exists when none other of the above mentioned symptoms are present, the diagnosis being made by its presence alone. Its presence should always arouse our suspicion of the presence of a new growth of some kind in the cranial cavity, but it is not always pathognomonic. It does occasionally occur as a complication of other diseases. A few spinal-cord lesions may produce it, such as disseminated sclerosis, acute myelitis, tetany, and multiple neuritis.

One of the cases seen by me this last winter, occurring in the practice of Drs. Rowe and Kuth, was of great interest. An infant of about six months of age was brought to them suffering from complete paralysis of both arms and legs. Their diagnosis was poliomyelitis located high up in the cord. In arriving at a diagnosis I was asked to examine the eye-grounds. I found marked choked disk in each eye. This was a great surprise, as choked disk had not been reported as an accompaniment of poliomyelitis.

None of the literature available mentioned the involvement of the optic nerve in this disease. I find, however, that facial paralysis and paralysis of the extrinsic eye-muscles occur¹; and it is extremely likely that optic neuritis also occurs with equal frequency, but is overlooked through negligence in examining the eye-grounds in this disease.

Choked disk has been observed in some of the exanthemata, such as scarlet fever, measles, and smallpox; and also in typhus fever, diphtheria, influenza, and whooping cough, also in albuminuria, diabetes, scrofula, and anemia, and sometimes it occurs in disturbances of the menstrual functions, with pregnancy or lactation.² With this large number of exceptions then, choked disk can hardly be considered as an absolute proof of a brain tumor, but it is, nevertheless, an invaluable one. It so commonly exists unsuspected that many cases are overlooked, and a diagnosis is not made. In all cases of headaches and in doubtful cases, an examination of the eye-grounds should be made. A study of the history of each case will usually lead the internist to give the optic lesion the importance it deserves.

The following case, referred to me some time ago by Dr. Tuohy, for fundus examination, illustrates the point:

Mr. F. A. D. saw Dr. Tuohy early in July. He consulted him for a tickling sensation in the throat and under the sternum when lying down; otherwise he felt well. Under examination Dr. Tuohy found a very high blood-pressure, and some albumin in his urine. He referred the case to me for fundus examination. I found a marked choked disk, combined with an extensive retinitis. I gave as my opinion that the choking of the disk was a part of the retinitis, which was albuminuric in origin. This proved to be the case. The young man rapidly grew worse, and lived only a few weeks from the time when first seen, succumbing from interstitial nephritis.

The location of the brain tumor seems to influence the choking greatly. Tumors of the frontal lobe rarely produce choked disk, and tumors of the cerebellum nearly always do. As a general rule, tumors of the brain are known to produce choked disk in increasing proportion the farther they are located from the frontal region, and in a decreasing proportion the farther they

*Read before St. Louis County Medical Society.

are located from the cortical region.³ Paton, in reviewing 252 cases of brain tumor, found that tumors of the cortex are more liable to produce choked disk than tumors of the subcortex, white matter, and pons; and that the intensity of the neuritis in tumors of the cerebral cortex varies inversely with the distance of the part affected from the anterior end of the middle fossa. Marcus Gunn propounded the opinion that the growth is always to be found upon the side of the brain with the greatest amount of choking of the disc. This rule is not always to be depended upon, however.

Nystagmus is another valuable symptom of cerebellar tumor. There are a number of types of nystagmus, such as the usual to-and-fro oscillatory type seen in eye-disease, or the perpendicular type when the eye jerks up and down, and the vestibular type where the eye moves from side to side with a slow movement in one direction, followed by a quick movement in the opposite direction. This type of nystagmus is found in cerebellar tumors. It is identical with the nystagmus found in vestibular disease. It is different from vestibular nystagmus in that in the latter the quick movement is always away from the affected side, while the former is a changing nystagmus, sometimes being toward, and sometimes away from, the side affected. It also differs from labyrinthine nystagmus, in that the former steadily increases while the latter soon subsides in the course of disease of the labyrinth.

There is a group of other symptoms that are usually present in cerebellar tumor. They are vertigo, incoördination, ataxia on the side of the lesion, diadokokinesia, loss or impairment of the arthrodial sense, and disturbance of equilibrium.

When the nystagmus accompanying cerebellar tumor first manifests itself there is also present an accompanying vertigo, produced by the nystagmus. This vertigo shows a tendency to subside, and in time entirely disappears. There are, however, present in these cases, separate and distinct from it, a vertigo and a tendency to fall that bears no relation to the direction of the nystagmus present. In these cases the tendency to fall is generally in the same direction. Vertigo of this type is one of the most characteristic symptoms of cerebellar tumor, and often exists when no other pronounced symptom is present. Unilateral incoördination ataxia is usually present in cerebellar tumor. It is

characterized by a lack of precision in the use of the hand and arm when attempting to carry out certain tests. For instance, if the patient is directed to touch the tip of his nose with his finger with his eyes closed, he readily does so with the finger of his sound side, but succeeds in doing it with the diseased side only after several to-and-fro oscillations in its vicinity. Another symptom of great value is diadokokinesia.⁶ When present, the side involved exercises its functions much slower than upon the normal side. In any test,—playing the piano or whirling the wrists upon themselves,—the affected side is seen to lag, the movements of the normal side being sometimes four times as rapid as those of the diseased side.

Arthrodial sense in some of these cases seems to be lost. If, after blindfolding a patient, his normal arm is put through some complicated movement and left in some unusual position, and he is instructed to do the same thing with the other arm, he signally fails.

Disturbance of equilibrium is a common symptom of cerebellar tumor. This is due to the destruction or injury of the Barony centers.⁷ Barony demonstrated the existence of two such centers high upon the cerebellum, arm, wrist, and shoulder-joint centers, and concluded that there were probably similar centers present for all the large joints of the body. There seems to be no fixed rule as to how the patient tends to fall in cerebellar disease, as is the case in vestibular disturbance. It is true, though, that the patient falls, or tends to fall, always in some fixed direction.

One of the most valuable of signs pointing to brain lesion is hemianopsia. Hemianopsia may be produced at any point from the optic chiasm to the occipital lobes. However, as the primary centers of vision are located in the occipital lobes, it is here that the lesion usually is located. It has been found that an injury to the visual cortex, producing hemianopsia, presents the peculiar characteristics of the patient being ignorant of his loss of vision. It has been shown that this loss of visual sense is not peculiar to hemianopsia of the occipital lobes, but may occur in some of the other regions of the brain. It seems strange that so much of a person's sight could be lost without discovery, but it occasionally occurs. Spiller mentions a case in which the sign was discovered after it was noticed that the patient, then in a large hospital, habitually ate the food on only one-half of his

plate. The presence of the hemiopic pupillary reaction of Wernicke, as modified by Wilbrand, in cases of hemianopsia, is a valuable aid in locating occipital tumors. By this sign diagnosis between disease of the cortical centers and lesions of the tract can be made. If the pupil responds to light thrown upon the blind half of the retina the lesion is behind the geniculate bodies. The presence of this reaction indicates that the pupillary nerves, which accompany the optic tract as far as the geniculate bodies, and there branch off, going to the third nerve nucleus and back by way of the ciliary ganglion to the pupil, are not involved. If the lesion is in the path of the pupillary reflex the pupil will fail to react. Hemianopsia of the primary centers does not necessarily mean the existence of tumor, as any lesion of the cortex in this region will produce it. The majority of cases are produced by rupture of a vessel with the formation of a clot and subsequent degeneration. It must be associated with other symptoms to justify a diagnosis of brain tumor. Hallucinations of sight are often present in tumors of the occipital lobes. They usually occur in the blind fields, and consist of flashes of light, scotoma scintillans, and the seeing of imaginary objects. De Schweinitz mentions a case where the patient saw chairs, tables, and other articles of furniture which were not present; and Jolly mentions a patient who had the hallucination that a dog was trotting along by his side. Other patients complain of seeing red and green lights. These hallucinations are not confined to lesions of the occipital lobes, but are more often present when located here. More valuable are alexia and optic aphasia as signs of a lesion of the left occipital lobe.

When paralysis of the cranial nerves occurs in association with homonymous hemianopsia it is in favor of a growth below the occipital lobes. This is not an absolute sign so far as paralysis of the sixth nerve is concerned as this nerve runs along the greater part of the base of the brain and sometimes becomes paralyzed by cranial pressure. Tumors of the pituitary body are easily confounded with those of the occipital lobes. A careful study of the symptoms will establish a diagnosis between them. The hemianopsia of the occipital lobes is homonymous. The hemianopsia of pituitary tumors is usually bitemporal. In only those cases where the pressure of the tumor is exerted back of the chiasm can it be homonymous. In those very rare cases of binasal hemianopsia the trouble is usual-

ly located in the optic nerve itself. In pituitary tumors the Wernicke pupillary reaction is absent also. These tumors are usually associated with acromegaly of dwarfism. Associated ocular palsies, paralysis of eye muscles are of great value in locating lesions in the brain. They would be of much greater value if the centers of origin were more clearly determined. There is evidence to believe that there are at least three centers that assert control over the associated movements of the extrinsic eye muscles. According to Paronau, associated paralysis of the lateral movements of the eye, is indicative of a lesion of the posterior longitudinal bundle near the sixth nucleus. The external rectus upon the side of the lesion may be more affected than the internal rectus of the other side, which is the rule in these cases.

In addition to this center there is strong evidence that there are centers both in the frontal and parietal lobe, controlling both lateral and vertical associated movements. Lesions in these cortical centers, however, produce only transient disturbances of the eye-movements, while a lesion in the longitudinal bundle produces permanent injury. A lesion of long standing then would point to this latter region. Any case where the associated paralysis is permanent is unsuited for operation, as the lesion is probably within the posterior part of the pons or cerebral peduncle. Associated palsies are sometimes hysterical.

Injuries to the corpora quadrigemina are liable to produce paralysis of single motor oculi, and trochlear nerves, whose nuclei are near the fissure of Sylvius. Paralysis may be upon one or both sides, according to the size and pressure of the tumor. In addition to paralysis there may be marked deafness. This is explained by the course of the fibers concerned in hearing. Fibers connecting with the cochlear nerve form the lateral fibers, which pass to the posterior colliculi of the corpora quadrigemina. From here other fibers pass to the internal geniculate body and the first and possibly the second temporal convolutions. Nystagmus is also an accompaniment of tumor of the corpora quadrigemina. It is of a peculiar type and consists of a clonic movement of both internal recti muscles.

Paralysis of the ocular motor nerve of one side and of the limbs of the opposite side with tremor of any variety, has been called the symptom complex of Benedict. This is not a purely typical tremor of the corpora quadrigemina, as in some way fibers in the foot of the cerebral pe-

duncle must be involved to produce paralysis of the limbs.

Tumors of the pons produce numerous and diversified symptoms, owing to the numerous important structures crowded together in this vital region. Even a very small growth will cause many striking symptoms. When the tumor is confined to one side of the pons it may cause a paralysis of the sixth nerve, the trigeminus, and the facial on the same side, causing loss of power of the external rectus muscle and a part or entire side of face. When the tumor lies low in the pons, branches of the acoustic nerve may become involved, producing deafness on the same side. The tongue and limbs may be paralyzed upon the opposite side of the body and even upon the opposite side of the face. Sensation also may be impaired on the opposite side of the body or opposite side of the face, due to the implication of the sensory nerves above their decussation. According to Spiller in the several cases that came under his observation, there was paralysis of the laterally associated ocular movements in every case, conclusively proving in his estimation that the longitudinal bundles were the centers for these associated movements.

In those cases where several of the ocular nerves are involved, causing multiple paralysis, the lesion must be in the base of the brain in the middle cerebral fossa, for it is only in this region that all the ocular nerves could be encroached upon by a new growth.

CASE HISTORIES

CASE 1.—Jennie O., aged 44, passed menopause. Dr. Chapman called me in to examine her fundi. One week ago she was taken with a terrific headache, which was soon followed by drowsiness, and later she lapsed into a state of coma. She had lived a licentious life, and was probably syphilitic. While she was in this comatose state Dr. Chapman had me examine her fundi. I found marked choking in both eyes. In view of her history it was concluded that there was present a gumma of the brain. She was put upon large and increasing doses of potassium iodide till the daily dose was forty drops three times per day. She soon began to show signs of improvement, and from the first made steady though slow recovery. Dr. Chapman tells me that she is now quite well mentally.

CASE 2.—Wm. H., aged 53, was seen by Dr. Tuohy on March 7, 1917, for the first time. Up to one year ago the patient had been in quite good health. During the last year he had four definite epileptic convulsions, after which attacks he was again quite well. During one of these attacks he cut his head badly in falling. During the year his wife has noticed a decided change in his disposition: from an easy-going disposition he had changed to an erratic and quarrelsome one. He has recently been full of grandiose ideas; and at times he has been out of his head. He has been complain-

ing of very severe headaches. There has been no vomiting, nor complaint of defective vision.

About the 13th of March he was taken to the hospital. The examination showed exaggerated reflexes, and a negative Wassermann. Following spinal puncture he became comatose for two days, during which time his eyes were examined by Dr. Winter and myself. We both found marked choked disks. He was put upon large doses of potassium iodide and soluble-mercury injections. For a few days he picked up, but relapsed again into stupor, and died upon the 19th. A diagnosis of brain tumor in the temporoparietal region on the right side of the brain had been made because he was more spastic over the left side of the body, and a decompression operation was planned for this region, but, unfortunately, he died too soon for this. Upon post-mortem a large tumor, the size of a small hen's egg, located in the parietal region about one-half inch below the cortical surface, was found, which upon examination proved to be sarcoma.

CASE 3.—July 31, 1917, Mrs. P. (a patient of Dr. Tuohy), aged 41. Up to one month ago patient was in good health. The present illness came on abruptly one month ago. She suddenly began to have severe headaches, at first frontal, later occipital. Vomiting soon supervened, which seemed to have no relation to food taken. She came to St. Luke's Hospital where a physician was called, and she was treated for nervousness and suspected nervous disorder. This greatly worried her, and she left the hospital for Woodland, where Dr. Tuohy was called. There was some difficulty in arriving at a diagnosis owing to a suspected pregnancy, but the persistence of the headache, vomiting, and slow pulse—all called for an eye-examination. I found upon examination marked choked disk in each eye. There could no longer be any question as to the nature of the trouble; an intracranial growth of some kind was present.

About this time the patient developed a facial paralysis upon the left side. A decompression operation was proposed. Dr. Ball, of St. Paul, saw this case and thought it a case of metastasis, as a small breast-tumor was found, which was thought to be malignant. As the patient was rapidly becoming drowsy a decompression operation was undertaken in the occipital region. The brain was under tremendous tension, and there were some hernia and much bleeding. The patient was greatly depressed, but rallied for a few hours, then passed into coma, and died in about thirteen hours after operation. Autopsy showed the brain to be normal except upon the right side of the cerebrum toward the posterior third. This region was softened and filled with blood. Microscopic examination showed the breast-tumor to have been scirrhous. The brain tissue examined showed nothing like the cancerous tissue of the breast, but in spite of this the case must have been one of metastasis from the malignant breast tumor.

CASE 4.—Fred G., seen by me with Dr. Linneman, on January 23, 1915. I have seen him many times since. He then complained of great loss of sight. Examination showed a marked optic atrophy in each eye. Vision in the right eye, perception of light; left eye, 20/200. A careful examination of the range of vision showed that the temporal field upon each side was lost except from five to ten degrees upon each side. In other words, he had nearly complete vertical temporal hemianopsia. The eye-symptoms had been present for one

and one-half years. He had a distinct specific history, and had commenced to show signs of locomotor ataxia. He had no symptoms of giantism, nor any other symptoms referable to the pituitary body. The case was evidently one of tumor of the pituitary body. The optic atrophy might be, and probably was, a part of the degeneration produced by the locomotor ataxia, but this disease could in no manner produce a hemianopsia. Bitemporal hemianopsia, a very uncommon occurrence, is almost always produced by tumor of the hypophysis, though exceptional cases have been reported by pressure upon the sides of the optic commissura by arterial wall changes in the large blood-vessels of the brain lying in close proximity to it. This man had been subjected to vigorous antispecific treatment by Dr. Linneman, which had a very beneficial influence upon the man's general health, entirely relieving his headaches. The sight after two years is equally as good as when first seen, a result that is certainly very gratifying.

CASE 5.—February 2, 1917. Frank Erickson, aged 6. Up to four months ago the patient was in good health. He first complained of pain or a sick feeling in his head. About five weeks ago he began to vomit, which lasted for a couple of weeks, and then subsided. About the same time he began to have trouble in locomotion, "walking like a drunken man," as his parents expressed it. He would fall to the sides, and always threw his head back. He was brought to St. Mary's Hospital January 20th, where he was carefully examined by Drs. Tuohy and Kuth, Winter, and myself. There was no marked deviation from the normal, with the exception of marked loss of equilibrium. The little fellow could not sit up or stand without falling backward or to the left side. None of the other symptoms of cerebellar tumor was present. Both disks were markedly choked. A diagnosis of cerebellar tumor was made, and a decompression operation decided upon. This was done January 17th by Drs. Kuth and Chapman. The opening was made in the occipital region without any serious change in the boy's condition. The dura was found to be tense and bulging. The dura was removed over the lobes in the wound, and there was some bulging outward of the cerebellum. No effort was made to locate the growth.

February 20th, the patient died. Dr. Holm examined the brain, and found a cyst within the left side of the cerebellum with dense, firm walls. The tissue taken from the tumor was examined by Dr. Martin microscopically, and appeared to be gliomatous in nature.

CASE 6.—T. F., aged 13, a patient of Dr. Rowe. In 1911 the patient developed a number of peculiar symptoms, such as trembling, clinging to objects to retain his equilibrium, a chewing motion of his mouth and

jaws, finally taking a long breath or two, and then he would resume his play. After a period of nine months these symptoms gradually disappeared. In 1913 the symptoms returned, and became intensified, so that he would have three attacks during the day and one at night. Recently these attacks had become much more severe. He would become unconscious, and froth at the mouth. He passes urine unconsciously, and afterwards falls asleep. At that time he came under Dr. Rowe's care, and was placed in the hospital. The condition improved, and he was discharged as cured of the convulsions. From this time on, until recently, the boy had been in good health. Just how long the present symptoms had been present I am uncertain—not longer than six months at most, as Dr. McCannel, of Minot, N. D., wrote me that at that time he examined the boy, when he found his vision normal and found no signs of brain tumor about him. Upon the 16th of July, 1917, he returned to Dr. Rowe for treatment. Upon examination it was found that there was paralysis of the right side of the face. The knee-jerks are greatly exaggerated and he drags one foot slightly when walking. He hears best with the left ear. His speech is slow and scanty, the tongue protrudes, goes slightly to the right. His gait is ataxic. There is marked valgus of both feet; station unsteady; and he is laggy in all movements. There was marked strabismus due to paralysis of the right external rectus muscle. There was choked disk and marked reduction in vision, the right eye reading, after correction with glasses, 20/30; and the left 20/40. It was apparent that there was pressure, involving the 6th, 8th, 9th, and probably the 12th nerves, causing paralysis of the right external rectus muscle, the right facial muscles, the paralysis of the left side of the tongue, and a drooping of the left posterior pillar of the fauces. All these symptoms justified the diagnosis of a new growth in the stem of the brain upon the left side, but encroaching upon the right, as well. Its location precluded any attempt at its removal, and its proximity to the medulla greatly increased the gravity of the prognosis. The boy was sent home. He lived about a month, dying in convulsions at that time. A decompression operation might have been done on the boy, but the certainty of his early death in any event caused us to refrain from performing it.

BIBLIOGRAPHY

1. Zingher, A.: Jour. of the Am. Med. Assn., March 17, 1917.
2. Fuch's Text-Book on Ophthalmology, p. 521.
3. American Cyclopaedia Ophthalmology, vol. iii.
4. Posey and Spiller.
5. Revue de Neurologie, as quoted in The Eye and the Nervous System.
6. Kerrison: Laryngoscope, 1917.
7. Kerrison: Diseases of the Ear.

GASTROPTOSIS AND PTOSIS OF THE TRANSVERSE COLON*

BY OSCAR DAIGNAULT, M.D.

BENSON, MINNESOTA

Among the different diseases that the stomach and bowels are heir to, there is one to which, I think, the general practitioner gives very little attention; and this disease is gastroptosis, or ptosis of the stomach, and ptosis of the transverse colon. Although the literature on this subject is very meager, most of the authors seem to take it for granted that, when one organ is ptosed, the others follow suit, and that there is a general ptosis in toto of all the abdominal organs; but I would like to point out some exceptions to this rule. I claim that you may have ptosis of the transverse colon and stomach together without a general ptosis of the liver, spleen, and kidneys.

If we go over the anatomy of the support of the stomach and transverse colon, we find that

though these attachments are given the name of ligaments, they are after all just folds of omentum and peritoneum, which is easily stretched, and more easily so if a person becomes emaciated.

Glenard, who was the first one to give a good description of this affection, thought that the transverse colon was the starting-point. He maintained that the transverse colon is fastened to the pyloric end of the stomach by a band or ligament, that the accumulation of feces in the ascending the transverse colon sometimes cause it to sag somewhat, and this sagging of the transverse colon exercises traction on the pylorus, thus causing the descent of the stomach. Whatever the cause may be, we do know that these patients are more or less emaciated, the abdominal mus-

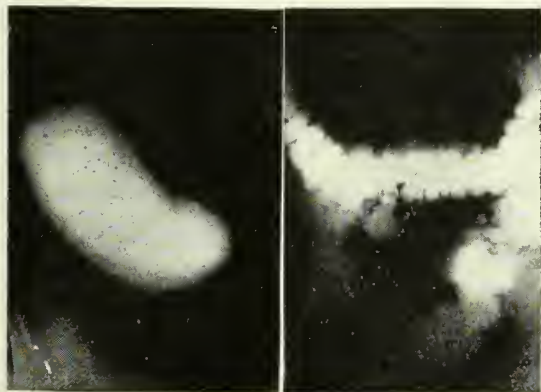


Fig. 1.

Fig. 2.

Fig. 1. More or less ptosis of the stomach. X-ray taken right after a meal of barium sulphate.

Fig. 2. The same patient as Fig. 1. Ptosis of the transverse colon.

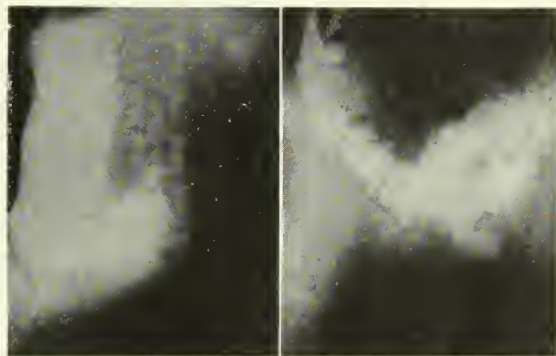


Fig. 3.

Fig. 4.

Fig. 3. Complete ptosis of the stomach.

Fig. 4. The same patient as Fig. 3. Complete ptosis of the colon.

the gastrocolic ligament connects the convex border, or great curvature of the stomach, with the transverse colon; the gastrohepatic ligament connects the upper concave border, or lesser curvature of the stomach, with the transverse fissure of the liver; the gastrosplenic omentum connects the cardiac end of the stomach with the hilum of the spleen; the gastrophrenic ligament, which is situated on the side of the esophagus, connects the fundus of the stomach with the diaphragm; the transverse mesocolon surrounds the transverse colon, and connects it with the back of the abdomen at the spine; the transverse colon is attached to the abdominal surface of the eleventh rib on each side by a fold of peritoneum. Al-

cles are flabby, and the peritoneal fats are mostly all gone, thus causing a relaxation of the internal abdominal supports.

The symptoms of this disease vary, more or less. Ptosis may exist without many symptoms, although most of these patients complain of pain in the epigastrium after eating, a dragging sensation in the abdomen, and some backache. Most of them are nervous and neurasthenic and discontented, complaining of a good deal of weakness, together with a tired feeling, and of constipation. All of these symptoms are very likely due to absorption from accumulation in the transverse colon. If we examine the stomach contents of these patients there is no acidity, in fact hypo-acidity generally exists. There is not much regurgitation of foods or gases after meals, al-

*Read before the Central Minnesota Medical Association, at Benson, Minn., March 22, 1917.

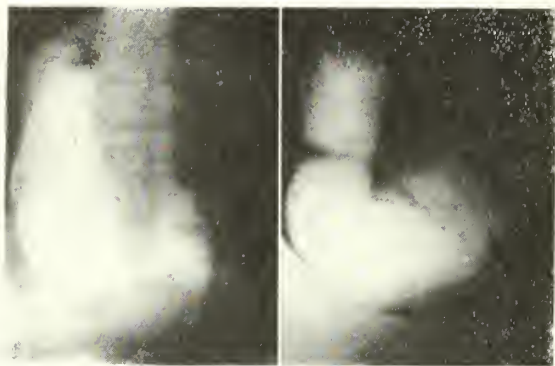


Fig. 5.

Fig. 6.

Fig. 5. Complete ptosis of the stomach.

Fig. 6. Ptosis of the stomach with spasm at the time the radiograph was taken.

though one would think there would be fermentation in the stomach on account of the slowness of emptying itself, so we see that the diagnosis of these cases is more or less difficult, as they do not always present gastric symptoms, but, instead, complain of a good many troubles throughout the body.

An early method of diagnosis of ptosis of the stomach and colon, besides palpation and percussion, was to inflate the stomach and colon, or fill them with air or gases, which was not altogether devoid of danger, but in the x-ray we have a

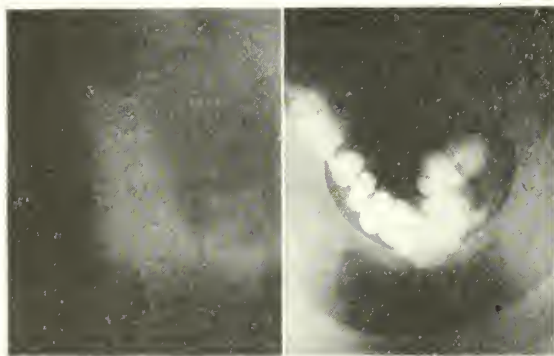


Fig. 7.

Fig. 8.

Fig. 7. Complete ptosis of the stomach.

Fig. 8. The same patient as Fig. 7. Complete ptosis of the colon.

surer means of making diagnosis; and, in my opinion, the only way to make a sure diagnosis is to get a radiograph of the stomach and colon with the patient standing to show the position of these organs.

We get a good radiograph of the stomach following a meal of barium sulphate, and, if you wait twenty-four hours, by that time the barium

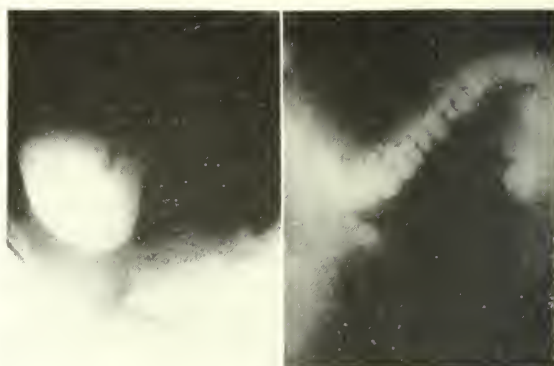


Fig. 9.

Fig. 10.

Fig. 9. Partial ptosis of the stomach.

Fig. 10. The same patient as Fig. 9. Partial ptosis of the colon. Notice the right side of the colon held down by adhesions.

sulphate will get down to the colon. We then can get a good radiograph of the colon, the descending colon and the rectum.

In the treatment of these cases, the surgeon and the medical man more or less agree; but most of the surgeons are willing to admit that suspension of either the stomach or the colon shows good results only in a few select cases; and of course the internists think there is only one way to treat these patients and that is medically. These cases, of course, are best handled in a hospital, though they could be treated at home. They should be put to bed, with the foot of the bed elevated so that the organs have a chance to get into their normal position. They should never be allowed to sit up while under treatment, except to be raised a little at meal time, as the prime object of this treatment is to build up these patients, so that the muscles, ligaments, and fats are replaced. Overfeeding should be the main treatment. These patients after a few days take easily six feedings a day, consisting of three good meals and three lunches. They are also given a general massage daily to help the metabolism. They are given this kind of a treatment for a period of six to eight weeks or until we have increased their weight from twenty to twenty-five pounds. No medicine is given except a general tonic. This is the only treatment in my opinion that will give these patients any benefit. After they get up they may be fitted with a corset or band to help the abdominal muscles. I think if we study these cases better and try to make a proper diagnosis we shall be able to help another class of cases that have been classified heretofore as neurasthenics.

ETIOLOGICAL RELATION OF SAPREMIA TO SENILITY*

By B. H. HAYNES, M. D.

ST. JAMES, MINNESOTA

Dr. Robert Saundby, in his recent book on "Old Age," when writing of the duration of life said:

"Metschnikoff believes that the cells are gradually poisoned by the toxins to which they are exposed, and that these are formed in the bowel; but he does not explain why it is that they are innocuous for forty or fifty years and then become capable of producing such serious results. On the other hand, if the toxins are not produced in the first fifty years of life and only then begin to be formed, their appearance may equally well be the result as the cause of the changes of advancing age."

Again referring to the author of the book "Old Age Deferred," Saundby writes: "Such theories as that of Lorand, who attributes old age to thyroid insufficiency, and of Husnot to suprarenal hypertrophy and adenoma, lack sufficient anatomical foundation, but if this were forthcoming, it again would only transfer the problem without answering it. We should still have to enquire why these glands undergo these changes after a certain number of years."

Further, Saundby says: "So we come back to the position that in the present state of our knowledge the phenomena of decay and death are beyond our means of explanation except as adaptations of the organism to the environment in which it is placed." "Senility is not identical with old age; it is quite possible to be old without being senile. Old age implies merely a lapse of time, but senility indicates deterioration of structure. In old age it must be allowed that there is always diminished power of repair, while work produces a greater feeling of fatigue and restoration from fatigue takes place more slowly. Senility or deterioration of the structure of the body is undoubtedly for the most part the effect of poisons, either the poisons of infective diseases or autogenetic poisons formed in the bowels or tissues, or poisons that are ingested or inhaled. When we consider that most of the examples of extreme old age come from the poorest classes in society, the effects of hard work and insufficient or improper food may evidently easily be exaggerated. At the same time it is quite true that our working classes do age prematurely, but it is probable that alcohol and syphilis, bad

air, and overcrowding are more important factors in producing this result than excessive bodily exertion."

Dr. E. E. Smith, in a recent article on "Chronic Intestinal Toxemias," reviews the opinions as to the different sources of gastro-intestinal toxemias, and says, in conclusion, with regard to the bacterial toxins:

"In the case of specific infections these doubtless play an important part, but in intestinal toxemias of the common chronic type, I believe we are justified in the conclusion that the products of putrid decomposition in large measure explain the toxic effects."

"In general, then, we must look to the biochemical data for our most serviceable indications of gastro-intestinal conditions."

Dr. Lorand, of Carlsbad, published in 1910 a book entitled "Old Age Deferred," in which he advances the theory that old age is a chronic disease due to degeneration of the glands with internal secretions (the ductless glands), of the thyroid, the sexual glands, and the adrenals. He devotes a chapter to the part these glands play in the causation of old age, and in another chapter on the "Elimination of Toxic Products from the Body," he says: "Besides microbes, we introduce into our body a large number of harmful products through food and drink (stimulants). Many toxic substances are formed by the decomposition of food, and also in the process of metabolism in the tissues. We are protected against these substances by certain organs which destroy them, as the thyroid, parathyroids, and liver, and by other organs which eliminate them, as the kidneys, the skin, and the intestines. When these organs are all working well, we may get rid of these products and not be affected by them; but in old individuals it is different, as their protective and eliminative organs have more or less degenerated. Then these substances are not destroyed entirely nor wholly eliminated. They are retained and cause the condition of auto-intoxication."

"It is very difficult to prove definitely by experiments that there really exists such a condition as auto-intoxication; but, practically, its existence cannot be denied. We note after changes in the above-named organs, when their functions are in abeyance, signs of intoxication in a pa-

*Read before the Watonwan County Medical Society.

tient, which include headaches and other nervous symptoms, with a haggard and colorless face. After a good movement of the bowels, perspiration, and abundant diuresis, we see a great change for the better. Thus, even if scientific experiments which are made on small animals do not strictly confirm the existence of auto-intoxication, the great improvement in our condition after improved elimination speaks very strongly for its existence. Therefore to prevent such a condition, we must do our best to keep these organs in good working order. In succeeding chapters we shall consider in detail the protective and eliminative functions of these organs, and the possibilities of their improvement by hygienic and therapeutic measures."

When writing on the "Hygiene of the Intestines," Lorand says: "Such poisonous microbes thrive and multiply very well in the alkaline contents of the intestines, but the growth of such dangerous bacteria can be greatly hindered by the introduction therein of acid substances, especially lactic acid * * *."

Professor Metschnikoff, of the Pasteur Institute in Paris, deserves great credit for having insisted on the importance of introducing certain microbes into the intestines for the purpose of transforming the sugar of their carbohydrate contents into lactic acid, thus causing the disinfection of the intestines by destroying the noxious germs and hindering their development. For this purpose the so-called Bulgarian bacillus can best be employed, as it is able to transform the cultures of pathological microbes in the intestine into a beneficent growth that is quite harmless.

"This Bulgarian bacillus is well known because of its action in producing the sour milk 'yoghurt' of the Bulgarian population, to the use of which, according to Metschnikoff, is due the very large number of centenarians to be found in that country."

W. E. Preble, in a recent (March, 1917) paper on "Intestinal Toxemia and Sequeke," says, however:

"Metschnikoff was the real founder of what we might call the 'school' of intestinal toxemia. His idea * * * is now an exploded theory."

From the above review of current medical

literature we may conclude, first, that a belief in intestinal intoxication as the chief cause of senile changes is no longer held by our leading writers, and, second, that sapremia, which is poisoning by disease germs living and growing in our tissues, is now looked upon as the leading cause of senile changes.

Immunization as practiced today may, therefore, be able to reduce this poisoning so far as to greatly lengthen the span of life.

BIBLIOGRAPHY

- Aaron, Charles D.: Intestinal Toxemia and Intestinal Stasis. *Jour. Mich. Med. Soc.*, April, 1917, vol. 16, p. 169.
- Barry, D. T.: Intestinal Toxins and the Circulation. *Lancet*, 1916, vol. 2, p. 14.
- Bassler, Anthony: Chronic Intestinal Stasis. *New York Med. Jour.*, 1915, vol. 102, p. 935.
- Croftan, A. C.: Intestinal Toxemia and Diabetes. *Med. Record*, 1914, vol. 86, p. 1085.
- Ferguson, R. H.: Intestinal Stasis and Constipation. *New York*, 1916.
- Hall, E. A.: Shortening of the Intestinal Canal for the Relief of Autotoxemia. *Canada Lancet*, 1915, vol. 48, p. 456.
- Holms, B.: The Production of Toxic Amines in the Intestinal Tract. *Chicago Med. Recorder*, 1916, vol. 33, p. 337.
- Jordan, A. C.: Some of the Results of Neglected Chronic Intestinal Stasis. *Surg., Gynec. and Obstet.*, 1914, vol. 19, p. 384.
- Kellogg, John H.: Colon Hygiene: Comprising New and Important Facts Concerning the Physiology of the Colon. *Battle Creek, Mich., Good Health Pub. Co.*, 1916.
- Kendall, A. L.: The Bacteria of the Intestinal Tract of Man. *Science*, 1915, vol. 42, p. 209.
- Lorand, Arnold: Old Age Deferred. The Causes of Old Age and Its Postponement by Hygienic and Therapeutic Measures. *Philadelphia: F. A. Davis & Co.*, 1910.
- McCoy, W. K.: Intestinal Intoxication; Headaches and Epilepsy. *Lancet-Clinic*, 1915, vol. 113, p. 474.
- Metschnikoff, Elie: The Prolongation of Life. Trans. by P. C. Mitchell. *New York: G. P. Putnam's Sons*, 1907.
- Nascher, I. L.: Geriatrics. The Diseases of Old Age and Their Treatment. *Philadelphia, P. Blakiston's Son & Co.*, 1916.
- Peckham, Charles Fenner: The Intestinal Putrefactions: Clinical Studies of Enterocolitis. *Providence, Snow and Farnham*, 1916.
- Preble, William E.: Intestinal Toxemia and Sequeke. *Boston Med. and Sur. Jour.*, March 1, 1917, vol. 176, p. 296.
- Saundby, Robert: Old Age: Its Care and Treatment in Health and Disease. *London, Edward Arnold*, 1913.
- Smith, E. E.: The Clinical Significance of Gastro-intestinal Toxemias. *New York Med. Jour.*, July 28, 1917, vol. 106, p. 161.
- Smith, E. E.: Chronic Intestinal Toxemias. *Proctologist and Gastro-enterologist*, March, 1917, p. 20.
- Smithies, Frank W.: Chronic Intestinal Stasis and Its Associated So-Called Toxemia. *Sur. Gynec. and Obstet.*, January, 1916, vol. 22, p. 57.
- Turck, F. B.: Intestinal Venous Stasis: Diffusion of Bacteria and Other Colloids. *Arch. of Pediatrics*, 1916, vol. 33, p. 923.
- Walsh, J. J.: Auto-Intoxication. *Internat. Clinics*, 1915, 25 ser., vol. 4, pp. 79-95.
- Winston, Ethel F.: Intestinal Intoxication. *Lancet-Clinic*, 1916, vol. 116, p. 252.
- Woolley, P. G.: Intestinal Stasis and Auto-Intoxication. *Lancet-Clinic*, September 9, 1915, vol. 113, p. 695.
- Woolly, Paul G.: Intestinal Stasis and Intestinal Intoxications: A Critical Review. *Jour. Lab. and Clin. Medicine*, October, 1915, vol. 14, p. 45.

THE JOURNAL-LANCET

Represents the Medical Profession of

Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the

North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
H. J. ROWE, M. D. - - - Casselton, N. D.
H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

FEBRUARY 1, 1918

WAR CASUALTIES AND THEIR AFTER-TREATMENT

It is very necessary for each warring country to begin at the first possible moment to consider the re-education and re-establishment of men in the armies. It has been stated that a comparatively few are killed in action,—that is, the general percentage of deaths is not large, although in some battles whole regiments and divisions are nearly wiped out of existence.

We have been told by Lord Carnwood, who conducts a quarterly publication dealing with the re-education of soldiers and sailors, that of every 1,000 men returning as unfit for further service, 453 are rendered so by injuries and 547 by disease: of the injured, 32 in 1,000 have wholly or partially lost their sight; 49 have lost an arm or leg; 264 have had serious injury to these limbs or to the hand; about 50 have been injured in the head; and about 60 have suffered miscellaneous injuries. Among the diseases, of course, tuberculosis accounts for the largest number, say, out of 1,000 men, 124 may have pulmonary tuberculosis; 110, the second largest in number, have heart disease; and the third group, 67, are victims of some form of nervous trouble, including epilepsy (11) and insanity (9).

Taking these figures into consideration, how much can be done for these unfit? The figures alone and the diseases will show how impossible it would be to repair the majority of these peo-

ple. The British have already provided administrative and institutional facilities for the care, education, and training of these returned soldiers. They not only provide artificial limbs for the legless and armless, but they are making systematic inquiry into what are the labor needs, not only of the individual, but of the community. Most of the men who have lost an arm or leg are unable to go back to their old occupations, but that is not a necessity, for they may fill other positions and do well in new lines of work,—for instance, a master chimney-sweep was turned into a clerk; an electroplater into a commercial instructor; a warehouse-man into an assistant for the outfitting of chauffeurs; a brass-finisher and gardener into switch-board attendants; store-keeper and farm laborer into prosperous film-operators.

Studying this question with these points in view, it means that this exchange of information and occupation reduces not only the pension and charity rolls, but the crime lists, because it produces practically a different individual with changed environment, and gets him interested in something that he had not dreamed of before. Of course, for the blind, or partially blind, there are many occupations open. They very readily learn trades, and are able to engage in various manufacturing lines, and not a small number of them are being taught massage, mechanical movements, and things of that sort.

It is a serious question as to what is to become of those rendered deaf by the explosion of guns and shells, etc., but something will eventually be done for them. They can follow many occupations which do not require the sense of hearing: they can become copyists, typewriters, and occupy many other positions of a clerical character.

The nervously unfit are going to be a difficult group to handle, and it now seems a very good time to put these people out on farms so they can live practically out of doors, but it would be well to precede this occupation with some form of instruction as to their method of living. Too many nervous people are shunted off, and told to go to the country and live on a farm without any regard to the fitness of the farm for their needs; and not infrequently the people who engage in farm pursuits are disqualified from a household point of view, and therefore these nervous subjects should be given a short course in housekeeping, cooking, preparation of foods, conservation of foods, and also food-production. Then they could live an almost ideal life, and

many of their nervous troubles would rapidly subside.

The rehabilitation of the cripple is a work which is being studied by the orthopedists; and an incredibly large number of these patients are repaired to such an extent that they can carry on successful and livable occupations. A tuberculous patient demands, not only out-of-door life, but occupational life; and, as has been said before, the man suffering from tuberculosis will not profit much in a sanatorium for his disease unless he is occupied in some profitable way, and it has been discovered that, even though the disease is far advanced, some light occupation is highly beneficial, and not infrequently men with the most serious forms of tuberculosis are able to interest themselves to such a degree that they are free from worries that accompany this disease, and are incidentally enormously benefited by the renewed activity of the nervous apparatus. This in itself is a great stimulation, and also a retarder of tuberculosis in proper out-of-door and in-door environment.

THE PNEUMONIA QUESTION

The newspapers have been reporting that pneumonia exists to an alarming degree in the various army camps, and blaming the situation on the fact that insufficient clothing and imperfect protection are provided for the soldiers. At first thought it seems as if this were a serious problem, but, when one considers that pneumonia is a germ disease, that it occurs in all parts of the country, not only in camps, but in civil life in this country and abroad, it is hardly fair to attach all the blame to the war department.

Pneumonia is a peculiar disease, in that it affects various people with various results. The hard, sturdy, apparently healthy man is the easy victim, and not infrequently succumbs within a few days to an attack of pneumonia. The ill-prepared, apparently the man with a bad heart or a history of former tuberculosis, is the man who lives through the pneumonia most successfully. This, of course, does not apply to every case, but it is sufficiently common to deserve comment. Minneapolis has its share of pneumonia, and so have all other cities; and it is dependent largely upon the resisting power of the individual rather than upon his immediate surroundings, although the latter cannot be entirely eliminated as a causative factor.

It is fairly well known that among the soldiers there are men taken from all ranks of life, from farm positions where ideal out-of-door elements

are presumably conducive to good health. In the city population, men who are taken from the shops and stores, who have led sedentary lives, and are more or less untrained physically, are also victims of pneumonia. It is quite widely known that the city man has more resisting power than the man from the farm, and there are many reasons perhaps for this. The city man is, in a way, more active in his pursuit of business, pleasure, and other things than the man in the country. The man of the farm works more and harder at certain seasons, and at other seasons he leads a more indolent life, than his city brother; and yet he is the first to succumb to strains and war work, and to communicable diseases. Perhaps the farmer is less frequently exposed to communicable diseases, while the city boy is constantly exposed to bad environment, to bad air in crowded cars and vehicles, and to other like conditions, and thus becomes, theoretically, if not practically, immune to many communicable diseases; and perhaps in this way his resistance is increased over that of the farmer lad.

Consequently there is no justification in adverse criticism on the number of cases of pneumonia that occur in camps. It is inevitable that a certain percentage of the soldiers will demonstrate their unfitness in many ways and particularly in their power of resistance.

It has been stated by those who are supposed to know, that there are more deaths from pneumonia than from tuberculosis. This, of course, cannot be applied to war conditions alone, but to individual predilection, some may call it fatalism. One man's power of resistance seems poor, whereas he is made up of tough fibers which enable him to go through, sometimes, unscathed and uncrippled, while the man who is presumably able to withstand shocks and unusual stress of any kind is the man who shows the real stuff of which he is made.

THE MINNEAPOLIS CITY HOSPITAL SITUATION

Three months ago it became the duty of the superintendent of the City Hospital, Dr. H. O. Collins, to discharge a nurse for violation of rules and for alleged misconduct. A charge of intoxication was brought against two of the nurses; and the executive staff of the Hospital found the charge to be true. As a result of the investigation, the two nurses were discharged; but one of them, after three months, decided to test the authority of the superintendent and appealed to

the Board of Charities and Correction, which at first endorsed the position of Dr. Collins. She then carried her appeal to the Civil Service Commission, which, after investigating the case, decided that she should be reinstated. This led to the threatened resignation of several of the hospital executive staff, including the superintendent of nurses, some supervisors, and some of the pupil nurses. Dr. Collins was called before the Civil Service Commission, explained the situation to them, and endeavored to show the necessity of rigid disciplinary measures for the maintenance of the nursing force. They rejected his explanation, and commanded him immediately to reinstate this nurse. He refused to do so, and stated he would resign his position as superintendent, for he could not conscientiously receive a nurse discharged under such circumstances.

The Hennepin County Medical Society, at its noon meeting on Wednesday, Jan. 23, upheld Dr. Collins in his views; and at a meeting of the staff of the City Hospital Dr. Collins was endorsed, and an appeal was made to the public stating that the City Hospital could not be efficiently managed or the patients properly cared for unless discipline was absolute. The disruption of discipline in any hospital means inefficiency, and the introduction of outside interference is unwarranted and illogical.

The opposition to Dr. Collins in his position comes from non-medical men, from boards whose members are not at all familiar with hospital work. If the superintendent is not upheld, the City Hospital will again return to lax methods, will be dominated by political influence, and those of us who have been associated with it know what this means.

The claim that this nurse was unduly and unreasonably dismissed from service cannot be upheld. It is well known that in all hospitals nurses are not infrequently dismissed for violation of rules. Sometimes the infringement is more or less trivial, usually it is quite sufficient to call for reprimand, and sometimes it is very grave, and justifies the dismissal of nurses; but, whatever the cause, trivial or grave, the superintendent, a trained hospital manager, is the one who should decide upon the personnel of his executive staff and also upon the personnel of the pupils in the training-school. Objectors overlook this important point when they interfere with a training-school, first, because they know nothing about what is required of nurses in a training-school, and, secondly, because they do not appreciate the necessity of more than usually

strict discipline to bring the nurse up to the proper standard.

At the City Hospital in Minneapolis the nurses are furnished with comforts and quarters that make their lives almost homelike. They are guarded and safeguarded in many ways, for their own good; and those of us who have had experience in the management of hospitals know that a large body of nurses cannot be controlled in an easy manner, but must be governed with a very firm and disciplinary hand.

It is known that all the hospitals in large cities have this problem to deal with, and, fortunately perhaps, the general hospitals which are not under municipal control are not questioned as to authority, although it must be understood that in every hospital the superintendent confers and consults with members of the board who are advisory, or members of the staff, who are also advisory and who are trained men in their various departments of medicine, so that the entire responsibility does not rest with the superintendent, but he is supported by a body of men and women who are interested, who are impartial, and who really know what is best for the institution. The fact remains, however, that the last word should be left with the superintendent of the hospital, and if, in his or her judgment, a nurse is overstepping the bounds of propriety or discipline, it is he alone who should have the authority to maintain his staff and his training-school where authoritative and disciplinary methods should be carried out.

The crux of the question is, Shall a nurse charged with intoxication, seen in this condition by members of the hospital's staff, and dismissed, be reinstated by a supervisory board against the protest of fifteen heads of departments?

Later, a compromise has been reached in this unfortunate controversy; the nurse will be reinstated at the end of sixty days; and thus a legal contest of rights will be avoided.

THE UNIVERSITY OF MINNESOTA'S GET-TOGETHER CLINIC

The Medical School of the University of Minnesota acknowledges its many obligations to the medical profession of the state; and it desires to meet these obligations by way of service. It realizes, moreover, that good understanding grows out of knowledge and that, if the profession is to know the needs, to appreciate the progress, of the Medical School, the profession and the School must get together. It proposes to

achieve this closer relationship in two ways: to go out to meet the profession and to ask the profession to come and see for itself something of the work and the aims of the School.

It has recently offered to every county society in the state the services of its faculty in contributions to the programs of meetings, by way of addresses, papers, demonstrations, or clinics. The societies are making welcome response to the offer, and already, in the past two months, the programs of four or five meetings have gained added interest from these contributions.

The University has now announced the first of a series of "Physicians' Days," upon which it invites the doctors of the state to visit the University and enjoy an immediate taste of its clinical and laboratory opportunities.

The first of these "Physicians' Days" will occur on February 7th and 8th, the Thursday and Friday of Automobile Week in the Twin Cities. Dry and operative clinics; obstetrical demonstrations; medical and pediatric clinics; hospital rounds for the study of especially selected cases; the study of laboratory methods of diagnosis; a meeting of the University Medical Society and demonstrations in anatomy, physiology, pathology, and pharmacology will occupy the entire day and evening of the 7th.

Gynecological and surgical clinics at the University Hospital; a visit to the out-patient clinics in internal medicine and in mental and nervous diseases, followed by ward rounds in medicine and pediatrics and a clinical-pathological conference, are scheduled for the 8th.

These overtures of the Medical School should be met with a warm hand and a hearty response from the men and women of medicine throughout the state. These occasions will mark the home-coming of many alumni. They will invite a closer acquaintance with the School and with the educational methods of the day. They will afford opportunities of inquiry, an awakening of the thirst for new knowledge, an introduction to new problems in medicine.

Medical education should extend itself beyond the years of undergraduate study. It should constantly give to the graduate the chance to renew his professional youth, to keep abreast of scientific progress. The Medical School in seeking to fulfill this function is opening up to itself and to the profession of the state a new vision, which will lead it on to larger growth and fuller usefulness.

Its invitation should be a rallying cry to the physicians of Minnesota.

MINNEAPOLIS CLINICAL WEEK

The Hennepin County Medical Society of Minneapolis has created a clinical section, composed of the clinical men of the Hennepin County Medical Society. The organization was effected Monday, the 21st of January. The officers elected were: Dr. A. W. Abbott, chairman; Dr. W. A. Jones, vice-chairman; Dr. E. J. Huenekens, secretary.

The purpose of the organization will be determined by the executive committee composed of the three men above mentioned and Dr. J. P. Schneider and Dr. J. G. Cross. From this executive committee other committees will be formed to take charge of the arrangements of the clinic, —an entertainment committee, a publicity committee, and a program committee. This part of the organization was completed on the evening of January 25th.

The principal object of the section is to give a clinic throughout the week beginning April 8th and extending to and including Friday, April 12th. It is planned to make the clinic week a very general one in which clinics in the various sections of surgery and medicine will be given at hospitals, the hours to be worked out and announced in our next issue.

The clinic is for the purpose of attracting physicians and surgeons all over the Northwest, including Minnesota, North and South Dakota, Montana, and a part of Iowa and Wisconsin.

The business headquarters of the section will be at the Hennepin County Medical Society rooms in the Donaldson Building, on Seventh Street and Nicollet Avenue, to which all communications may be addressed. The Secretary will have stenographers and typists under him who will circularize the medical men. This early announcement is made in order that our expected visitors may take a note of the occasion and also that they may be notified of this week of clinical importance. Return postal cards will be sent out later in order to get an estimate of the number of men who may be present. The clinics, however, will take place at the time stated, and will be conducted whether there are ten or one hundred visiting men. It is hoped that the clinical section will hold monthly or quarterly meetings, as the executive committee may decide.

Our readers are kindly asked to watch each issue of this paper for announcements, in order to keep fully informed as to the program, which will be a scientific one at first, which the section hopes will be very interesting.

NEWS ITEMS

Dr. G. M. Sewall has moved from Deerwood, to Alta, Canada.

Dr. R. C. Heron has moved from Tolna, N. D., to McVile, N. D.

Dr. L. S. Platou has moved from Valley City, N. D., to Fargo, N. D.

Dr. A. E. Hillis, of La Moure, N. D., has moved to Tacoma, Wash.

Dr. W. E. Ellis, formerly of Alexandria, is now located at Dunbar, Wis.

Dr. H. A. Cooperman will move from Grand Forks, N. D., to Minto, N. D.

Dr. Carlyle Hare will soon move from Spearfish, S. D., to Belle Fourche, S. D.

Dr. J. E. Hetherington has been appointed health officer of Grand Forks, N. D.

Dr. Louis Holtz, of Springfield, O., has been appointed city health officer of Aberdeen, S. D.

The West Side General Hospital of St. Paul graduated a class of eight nurses last month.

Dr. F. E. Weed, of Park River, N. D., has been commissioned first lieutenant in the M. R. C.

Amidon, N. D., is said to be in need of a physician, and the location is reported to be a good one.

Dr. L. A. Mangan, of Outlook, Mont., closed his hospital at that place to enlist in the Medical Corps.

Dr. Werner Hemstead, of Brainerd, has been appointed physician to the State Reformatory at St. Cloud.

The Montana State Board of Health has ordered the city of Havre, Mont., to put in a sewage-treatment plant.

Wisconsin has furnished a larger percentage of physicians for the Medical Reserve Corps than any other state except Pennsylvania.

The Women's Auxiliary of the St. Louis County Medical Society are caring for two Armenian orphans whom they "adopted" last fall.

Dr. E. H. Marcum, of Bemidji, having spent two months in Chicago doing bone-work, has gone back to Fort Riley for special work.

St. Cloud sold about 100,000 Red Cross seals. The part of the proceeds retained will be given to the support of the city's community nurse.

The next annual meeting of the North Dakota State Medical Association will be held at Fargo on June 19 and 20, a later date than usual.

Dr. Earl Crafts, of Carthage, S. D., has accepted a teaching fellowship in Medical School of the University of Minnesota, and has moved to Minneapolis.

Dr. Herbert A. Burns, epidemiologist of the Minnesota State Board of Health since 1912, has joined the Medical Reserve Corps, and is now at Fort Riley, Kas.

Dr. Marten Oyen died at Ellsworth, Wis., on Dec. 28, 1917, at the age of 35. Dr. Oyen was a graduate of the Medical School of the University of Minnesota.

Mr. E. P. Johnson, graduate of the North Dakota School of Medicine, 1917, has returned to the school for the second semester as an instructor in pathology.

Butte, Mont., is apparently free from the further spread of smallpox. All the school children of the city were vaccinated by the order of the State Board of Health.

The University of Minnesota will build an addition to the Elliot Memorial Hospital, for the exclusive use of sick students of the University. The addition will have 200 beds.

An effort will be made in Duluth to require, by city ordinance, every physician in the city to file a copy of his license to practice. This will be done in order to reach the quacks.

The securities and cash of the Mayo Foundation have been turned over to the State treasurer of Minnesota. They amount to approximately \$1,700,000. The fund will soon reach \$2,000,000.

Captain R. D. Campbell, M. R. C., who has been transferred from Philadelphia to the base hospital at Camp Grant, Rockford, Illinois, visited in Grand Forks and Winnipeg a few days early in January.

Mr. W. W. Hanford, chemist and bacteriologist in the North Dakota Public Health Laboratories for the last three years, has resigned, to enter the army. He is at present at Jefferson Barracks, St. Louis, Mo.

Cass County, N. D., like other counties in the state, has been divided into districts for medical school-inspection, and will depend upon physicians to examine the rural-school children, instead of employing a visiting nurse.

At the Sixth District Medical Society, held on January 15, at Bismarck, Drs. N. O. Ramstad, V. J. La Rose, and F. B. Strauss read medical papers; and Attorney C. L. Young, of Bismarck, read a paper on "Fractures and Malpractice Suits."

Dr. Bryed Wilson, of Huron, S. D., who has been in St. Luke's Hospital of Chicago since his graduation in Chicago two years ago, has become associated with Drs. Casey Wood and Frank Allport, the well-known specialists of Chicago.

Mr. S. Hunter Shippey, bacteriologist, has recently joined the staff of the North Dakota Public Health Laboratories, coming from the Public Health Laboratory at Macon, Georgia. Mr. Shippey will probably be placed in charge of the Bismarck branch laboratory.

At the annual meeting of the South Dakota State Board of Health and Medical Examiners, held last month at Pierre, the following officers were elected: President, Dr. H. E. Kenaston, Bonesteel; vice-president, Dr. C. E. McCauley, Aberdeen; secretary, Dr. P. B. Jenkins, Waubay.

Dr. E. J. Huenekens, of Minneapolis, read a paper before the Park Region District and County Medical Society last month on "The Treatment of Whooping Cough, with Special Reference to Pertussis Vaccine." This was a preliminary report of original work done by him in pertussis vaccines.

Dr. J. R. Pence, of Minot, N. D., who has been ordered to Fort Riley, has an accomplishment that few medical men possess: he is an expert marksman, a "crack shot." He may be handier with a gun than with a scalpel. His brother, Dr. R. W. Pence, will take charge of his practice—in medicine, not in trap-shooting.

The South Dakota State Association of Graduate Nurses met in Sioux Falls last month. The Association will change its name to the S. D. Registered Nurses' Association, and will admit members through the District Associations, three of which cover the state. Only five nurses took the examination for certificates.

The Winona County Medical Society held its annual meeting at Winona last month, when the following officers were elected: President, Dr. C. A. Neumann, Lewiston; vice-president, Dr. C. A. Lester, Winona; treasurer, Dr. W. C. Heise, Winona; secretary, Dr. H. E. McGaughey, Winona; delegate, Dr. D. B. Pritchard, Winona.

Dr. W. E. Harwood, of Eveleth, recently died in France at the age of 60. Dr. Harwood had practiced in Tower and Eveleth for many years, and he founded Fabiola Hospital in the latter city. He was only recently made captain, and was doing splendid work as an x-ray specialist with a hospital division sent to France by the Northwestern University.

The superintendents of state institutions in Minnesota will have a conference with the State Board of Control on Feb. 5. The general subject for discussion is venereal blood-poison. Dr. L. G. Rowntree of the University, Dr. R. M. Phelps of the St. Peter State Hospital for Insane, and Dr. F. Kuhlmann of the State School for Feeble-Minded, will read papers.

The Northwestern District Medical Society of North Dakota held its annual meeting at Minot on Jan. 15. Dr. E. M. Ransom, of Minot, and Director Ford, of the State Public Health Laboratory, read papers. The following officers were elected: President, Dr. E. M. Ransom, Minot; vice-president, Dr. F. K. Kolb, Granville; secretary-treasurer, Dr. P. A. Nestos, Minot.

The Attorney General of Minnesota has pronounced legal the regulations for the control of venereal diseases, passed by the State Board of Health. A division of the Board will have charge of this work and will be under the supervision of Dr. H. I. Irvine, of Minneapolis. Persons with any venereal disease who refuse to obey the Board's regulations may be registered and quarantined.

The Cass County Medical Society of North Dakota met in annual session at Fargo on Jan. 14. Plans for the entertainment of the State Association were considered. It was voted to present a souvenir to each of the Society's six members who are in the Medical Corps. Officers were elected as follows: President, Dr. John H. Rindlaub, Fargo; secretary, Dr. C. N. Callander, Fargo.

The percentage of drafted men "physically fit" for service was greater in South Dakota than in any other state. Pennsylvania has the distinction of standing at the other end of the list. Of the group of states, thirteen in number, standing second in the percentage list, all but one, Alabama, are in the Middle West, constituting a solid belt from north to south, except for Colorado and New Mexico, which fall in the third group of twenty or more states.

At the annual meeting of the staff of the Swedish Hospital of Minneapolis, held last month, it was decided to organize a staff clinic for group diagnosis in difficult cases. Private patients whose physicians call for such consultation will be charged a moderate fee, if any at all, and such fee will go to the hospital, and not to the consultants. It was also decided to divide the staff into a general staff, to include the general practition-

ers, and a special staff, the latter to include the men confining their work wholly to specialties.

At the monthly meeting of the Grand Forks District Medical Society on January 9, Dr. H. G. Woutat, of Grand Forks, and Mr. B. C. Ford, of the Minot branch of the State Public Health Laboratory, presented papers dealing with urinary findings and the diagnosis of kidney lesions. Officers for the following year were elected as follows: President, Dr. Thos. Mulligan; vice-president, Dr. W. H. Witherstine; secretary, Dr. H. J. Friesen; treasurer, Dr. H. W. F. Law; delegate; Dr. Thos. Mulligan; censors, Dr. G. M. Williamson and Dr. G. J. Gislason.

The Government has extended the students in a number of high-grade medical schools—in the main, the A-1 schools—the privilege of enlisting in the Enlisted Reserve Corps, which permits them to finish their medical course and a year's internship, provided they maintain their standing in scholarship and take the year's internship. They are, however, subject to call to service in case of great need for their service. Over two hundred medical and dental students in the University of Minnesota will be permitted to finish their courses; and twenty from the Medical School of the University of North Dakota have enlisted.

The directors of the Thomas Hospital of Minneapolis report that the year 1917 was financially a very trying one for that institution with its large amount of charitable work; and the outlook for 1918 is not encouraging, with prices of everything sky-high, and the hospital rates stationary, which the Board refused to increase, because even a small increase would work a hardship to many unfortunate victims of tuberculosis. The Board chose rather to appeal publicly for help, and the results were gratifying, though not meeting all their needs. The charity fund comes largely from the members of the Norwegian Lutheran Church, but all patients at the hospital are thereby benefited, irrespective of religious belief or nationality.

PROGRAM OF PHYSICIANS' DAYS AT THE MEDICAL SCHOOL OF THE UNIVERSITY OF MINNESOTA

Thursday and Friday, February 7 and 8

Thursday, February 7

9:00-10:00 A. M.

Dry Clinic.....Dr. J. E. Moore
Obstetric Demonstration.....Dr. F. L. Adair

10:00-12:00 M.

Operative Clinic.....Dr. A. MacLaren
Operative Clinic.....Dr. W. R. Murray

2:00-3:00 P. M.

Medical ClinicDr. L. G. Rowntree
Pediatric Clinic.....Dr. W. R. Ramsey

3:00-4:00 P. M.

Ward Rounds—

Nervous and Mental.....Dr. A. S. Hamilton
ChildrenDr. F. W. Schlutz
MedicineDr. F. G. Blake
HeartDr. A. D. Hirschfelder

4:00-5:00 P. M.

Demonstrations in Medical Laboratories—

Grouping of Blood
Phthalein Test and Alveolar CO₂
Benedict for Sugar

8:00 P. M.

University Medical Society at the Institute of Anatomy—

.....Dr. E. P. Lyon, 10 min.
Eclampsia.....Dr. W. H. Condit, 15 min.
Dental Infections.....Dr. T. Hartzell, 10 min.
Disease in Cantonments....Dr. F. C. Todd, 15 min.

9:30 P. M.

Laboratory Demonstrations—

Anatomy
Physiology
Pathology
Pharmacology

Friday, February 8

9:00-10:00 A. M.

Gynecological Clinic.....Dr. J. L. Rothrock
Operative Clinic.....Dr. H. P. Ritchie

10:00-12:00 M.

Gynecological Clinic.....Dr. J. C. Litzenberg
Operative Clinic.....Dr. Howard Clark

1:30-2:30 P. M.

Medical Dispensary—

General Medicine.....Dr. J. P. Schneider
Gastro-intestinal.Drs. R. I. Rizer and C. B. Wright
Tuberculosis.....Dr. F. W. Wittich
HeartDr. Olga Hanson

2:30-3:00 P. M.

Clinic—

Mental and Nervous.....Dr. A. S. Hamilton
Medicine.....Dr. H. L. Ulrich

3:30-4:30 P. M.

Ward Rounds—

MedicineDr. L. G. Rowntree
.....Dr. E. T. F. Richards
.....Dr. R. I. Rizer
PediatricsDr. W. R. Ramsey

4:30 P. M.

Clinical-Pathological Conference at the Institute of Anatomy.

RECENT TRANSFERS, ASSIGNMENTS, ETC., OF NORTHWESTERN MEDICAL OFFICERS

Minnesota.—

Lieut. S. F. Rudolph, Albert Lea, at Camp Talliaferro, Texas, promoted to captain.

Lieut. O. L. Winter, St. Paul, to Harvard Medical School, for instruction.

Capt. J. D. Walker, Wykoff, from San Francisco to Camp Cody, N. M.

Lieut. W. M. Moir, Minneapolis, from San Francisco, to Camp Kearney, Calif.

Lieut. P. A. Schulte, Fort Snelling, to Fort Leavenworth, Kas.

Capt. E. H. Marcum, Bemidji, and Lieut. W. W. Nauth, Minneiska, to Fort Riley, Kas.

Lieut. A. G. Sanderson, Minnesota, has been honorably discharged.

North Dakota.—

Lieut. J. E. Countryman, Grafton; Lieut. F. T. Rucker, Bismarck; Lieut. George Monteith, Hazleton; Lieut. J. R. Pence, Minot; Lieut. H. T. Skovholt, Williston; Lieut. Benj. Frankson, Rugby; Lieut. J. F. Hanna, Fargo; Lieut. Alex. Oftedahl, Fargo, to Fort Riley, Kas.

South Dakota.—

Lieut. E. H. Boon, Tyndall; Lieut. F. D. Wilson, Armour; Lieut. A. O. Fasser, Belle Fourche; Lieut. R. J. Quinn, Burke, to Fort Riley, Kas.; Lieut. G. A. Landmann, Scotland, to Camp McClellan, Ala.; Lieut. E. C. Soldird, Stapleton, to Fort Oglethorpe, Ga.

Montana.—

Lieut. T. W. O'Brien, Butte, from Fort Oglethorpe, Ga., to Lakewood, N. J.

Lieut. W. G. Dye, Great Falls, to Fort Riley, Kas.

PHYSICIAN WANTED

A good physician is wanted for an unusually good location. Address C. N. Rostad, Westby, Mont.

MEDICAL BOOKS FOR SALE

New and used medical books for sale. Bargains. Write for our list. The Isca Co., Booksellers, Minneapolis, Minn.

PART OF OFFICE FOR RENT

Wanted, a physician to share the offices of a dentist in the Donaldson Building, Minneapolis. Rent reasonable. Telephone Nicollet 1160 for full information.

POSITION WANTED

An experienced nurse wants a position as an assistant superintendent of a small hospital or as a surgical nurse. Good references given. Address 109, care of this office.

A McCASKEY PHYSICIAN'S SYSTEM FOR SALE

A one-hundred-dollar McCaskey's physician's system is offered for sale for \$70.00 cash. It is brand new, never having been used. Address 111, care of this office.

POSITION WANTED

A graduate of an A-1 school, having completed internship at the Minneapolis City Hospital, desires a position with a Twin City physician. Has had 18 months' experience as assistant city physician. Scandinavian. Address 103, care of this office.

LOCUM TENENS WANTED

By February 1, for two or three months, in a general and surgical practice, with a six-bed hospital, in an excellent town of 900 in northern Minnesota. Privilege of buying. References required. Scandinavian preferred. Address 108, care of this office.

A SPLENDID OPENING

There is an excellent opening in a fine village near the Twin Cities for a high-grade physician who can do some surgical work. A man under forty is preferred. A splendidly equipped office is ready for him. There is nothing to sell; simply the right man is wanted. Address 107, care of this office.

EXCELLENT OPENING FOR A PHYSICIAN

A splendid opening for a physician in best city of Central North Dakota. Hospital facilities, educational facilities, large tributary territory and in fact every condition exists here which may be desired including an ideally situated office. For particulars address, P. O. Box 1, Jamestown, N. D.

PARTNERSHIP OR ASSISTANTSHIP WANTED

A partnership or assistantship with a future is wanted in the Twin Cities by a man thirty-five years old, with four years' hospital and six years' successful general practice; Protestant, a good mixer, and a hard worker. Will consider an ethical proposition only; available immediately. State full particulars. Address 110, care of this office.

OFFICE FOR RENT

Over ten per cent of the physicians of Minneapolis have been called to war. This has left many vacant offices, many of them in central locations, making an opportunity for physicians and dentists in outside locations to come to the center. The Pillsbury building, Sixth and Nicollet, is in the heart of Minneapolis, and offers some excellent space in single, double, or en suite.

SANITARIUM FOR SALE

Excellent lake shore sanitarium site with a fifteen room main building and seven cottages, together with all other necessary outbuildings, beautifully situated on 70 acres of wooded land. Located in the heart of the pines, within convenient distance of the Twin Cities, and close to railway station and town. Splendid macadamized road to property. Will make a very interesting proposition of sale or exchange on this property. Ask for Mr. W. E. Wakeman, Thorpe Bros., 206 Andrus Building, Minneapolis, Minn.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-first annual session, opened Sept. 24, 1917, and closes June 8, 1918. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters this session. For further information address Charles Chassaingnac, M. D., Dean, New Orleans Polyclinic, post office drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

In the Treatment of

RHEUMATIC and NEURALGIC ILLS

you will obtain substantial aid from the thorough use of

K-Y ANALGESIC

This non-greasy, water-soluble local anodyne will enable you to ease your patient's pain and discomfort, while your internal or systemic medication is combating the cause of his condition.

The advantages, moreover, of relieving the pain of a facial neuralgia, an inflamed joint, or aching lumbar muscles without recourse to coal tar derivatives cannot fail to appeal to medical men.

K-Y ANALGESIC is a safe and effective adjunct that will daily grow more useful to the practitioner as the many opportunities for its effective use are realized.

VAN HORN AND SAWTELL

NEW YORK CITY, U. S. A.
15 and 17 East 40th Street

and

LONDON, ENGLAND
31 and 33 High Holborn

*Hands that
are Rough,
Cracked and
Sore* are re-
stored to their
natural softness
and comfort by
**K-Y Lubri-
cating Jelly**,
well rubbed in.



It "works in" quickly, and doesn't soil the linen. You know it as a surgical lubricant; it's "just as good" an emollient.

*Collapsible tubes, druggists, 25c.
Samples and literature on request.*

VAN HORN and SAWTELL
15-17 East 40th Street New York City

STRAINING AT STOOL

with its essential dangers, can be greatly reduced and often entirely prevented by the judicious use of

INTEROL

By softening the intestinal contents, and lubricating the passage, the fecal mass readily passes along the colon to the rectum and is easily evacuated.

To the sufferer from hemorrhoids or fissures, **INTEROL** is of great comfort, because it keeps the fecal mass soft and plastic, and thus allows it to be passed, easily and painlessly, without local congestion.

Sig—3 ss. morning and night on an empty stomach, the dose to be reduced or increased under the physician's directions, as the effects are produced.

Pint bottles, druggists. INTEROL booklet on request; also literature on "Straining at Stool"

VAN HORN AND SAWTELL
15 and 17 East 40th Street, New York City

Minneapolis Clinical Laboratory

Oldest in the Northwest

N. W. Nic. 3690 410 Syndicate Bldg. T. S. 33 117

We make Auto vaccines from discharges
or the blood

Wassermann Test - - - \$5.00

Serum Test for Gonorrhea, \$5.00

Serum Test for Tuberculosis, \$5.00

HENRY L. ULRICH, M.D., Director

Private Maternity Home

For Women before and during
Confinement.

Infants cared for. Physicians and Nurses in
attendance.

Good References Given.

MRS. J. W. MOREY

2014 26th Ave. So.,

MINNEAPOLIS, MINN.

Use Vaccines in Acute Infections

The early administration of Sherman's Bacterial Vaccines will reduce the average course of acute infections like Pneumonia, Broncho-pneumonia, Sepsis, Erysipelas, Mastoiditis, Rheumatic Fever, Colds, Bronchitis, etc., to less than one-third the usual course of such infectious diseases, with a proportionate reduction of the mortality rate.

Sherman's Bacterial Vaccines are prepared in our specially constructed Laboratories, devoted exclusively to the manufacture of these preparations and are marketed in standardized suspensions.

Write for Literature.

MANUFACTURER
OF
BACTERIAL VACCINES

G. H. SHERMAN, M.D.
Detroit, Mich.
U.S.A.

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY
AND PROMPTNESS ARE OUR
CHIEF AIMS. Send to our nearest
laboratory for fee list and containers
with instructions for collecting all
specimens. These containers will be
sent gratis upon request.

Examination of Pathological Tissue \$5.00

Accurate histological descriptions and diagnoses
of tissues removed at operation should be part
of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and
anaerobically and isolate the offending organ-
isms. Pipettes for collecting material for auto-
genous vaccines sent upon request.

Wassermann Test, Blood or Spinal Fluid \$5.00

We do the classical test. Any of the various
modifications will be made upon request without
additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

PUBLISHER'S DEPARTMENT

LAVORIS

Lavoris is zinc chloride in permanent solution with other ingredients added for the well-known properties of each; and the name and quantity of each ingredient are put upon the label of every bottle. The manufacturers have simply compounded these useful ingredients in a permanent and pleasant form for application to the mucous membrane. They make no extravagant claims for this preparation, and indeed make none whose truth can be questioned by any physician.

Lavoris may truthfully be called an elegant preparation whose ingredients indicate to every medical man conditions in which it is applicable and useful. It is manufactured by the Lavoris Chemical Co., of Minneapolis.

THE STANDARD MEDICAL SUPPLY COMPANY

The Standard Medical Supply Company, of Minneapolis, which has become so well and favorably known to the physicians and surgeons of the Northwest, held its annual meeting last month, when a full report of the year's business activities was given to the stockholders, and it proved entirely satisfactory as the year's business showed a very prosperous condition of the company. The capital of the company was increased, and arrangements were made for the enlargement of the factory for the manufacture of sterilizers, enamel furniture, stands, instrument cabinets, and hospital furniture in general.

The following were elected directors: Dr. F. A. Dodge, Le Sueur; Dr. A. B. Kirk, Chisholm; Dr. — Williams, Chippewa Falls (Wis.); and Messrs. A. J. Hogan, I. C. Bryant, P. M. Staines, and W. W. Smith. Dr. Williams succeeds M. J. Rodearmel, resigned.

The directors elected the following officers: President, A. J. Hogan; vice-presidents, I. C. Bryant and Dr. F. A. Dodge; secretary, L. M. Rocheford.

Plans were outlined for reaching out for an increased volume of business for this year.

AMERICAN VERONAL

In the Trading with the Enemy Act recently passed by Congress, provision was made for the licensing of American manufacturers by the Federal Trade Commission to produce articles and substances patented in this country by enemy aliens. Already a number of chemical manufacturers have taken advantage of this provision, among them The Abbott Laboratories of Chicago, which has applied for and secured a license for the manufacture of Veronal, which, however, will be known hereafter by the name Barbitol. This is the official name given it by the Federal Trade Commission, and this name must be used as the principal title by every firm manufacturing it under license from our Government.

The Abbott Laboratories have already begun the manufacture of Barbitol (formerly known as Veronal), and we understand that in short time it expects to have an abundant supply of this well known hypnotic, and that it will be made generally available through the trade. The quality of the product is guaranteed. Indeed, before a license is granted for the manufacture of

any of these patented synthetics in the United States, the product must be submitted to rigid investigation at the hands of a chemist designated by the Federal Trade Commission. In this way Americans are assured of supplies of the American-made products at reasonable prices, and the manufacture of fine American chemicals is given the stimulus which it requires.

Those interested are urged to communicate with The Abbott Laboratories, Chicago.

AN IMPROVED STETHOSCOPE

Every instrument of increased precision used in diagnosis meets with hearty acceptance from the medical profession, and especially if it is an instrument frequently used.

Such an instrument, in an eminent degree, is the Dr. Lee-Hillis stethoscope for the detection of fetal heart-bones during the second stage of labor. This instrument is easy of adjustment, and remains steadfastly in place. It is so located on the head that it is above the line of sight, and its movement from point to point is perfectly free.

The heart-bones have a certain amount of conduction to the observer through a bone and metal conduction, in addition to the air conduction through the ordinary tubes of a stethoscope. The added conduction is through the metal of the instrument and the bone of the head of the examiner. This gives the physician easy and accurate control of the heart-bones, which are so essential in labor.

The price of the instrument is \$6.00, and it is made by Messrs. Sharp & Smith, an old-established and reliable Chicago firm of instrument manufacturers and jobbers.

THE CHAMBERLAIN SANITARIUM AND THE OTTAWA (ILL.) TUBERCULOSIS COLONY

Among the distinguished experts in the care and treatment of tuberculosis patients, few stand so high as Dr. H. V. Pettit, the superintendent of the Ottawa Colony.

It is quite common to designate the treatment of the tuberculous by some name which, after all, may be a minor part of the treatment,—for instance, *out-of-door* treatment, *mild-exercise* treatment, etc. Now, the truth is no single form of treatment can be relied upon. Tuberculosis is arrested or, at times, cured by making over and building up its victim, and practically every patient is a law unto himself. *Institutional* work, though the term is by no means specific or comprehensive, has become recognized as almost indispensable in the care of the tuberculous, and when conducted by the right man in the right place with the right environment, successful results follow in a percentage of cases that almost robs the disease of its terrors.

Dr. Pettit's brochure on "What the Tuberculous Patient Should Know" is sent free upon request, and it gives information that every physician should have.

CAMPHOR IN OIL IN PNEUMONIA

Camphor when added to culture media even in the proportion of 1 to 10,000 inhibits the growth of pneumococci. A series of experiments on rabbits in which an emulsion of pneumococci was injected intravenously, showed that injections of camphorated oil retarded death from two to five days in all and in 50 per cent of the cases prevented it. Clinical experience has demonstrated that hypodermatic injections of camphor are

not toxic. A prominent physician of New York City has given over four thousand injections of camphor in oil, sometimes giving as high as one hundred and fifty grains daily to one patient without any symptoms of poisoning.

Camphor hypodermatically exerts an inhibitory action on the pneumococci in the blood-stream, and appears to have an antitoxic effect analogous to diphtheria antitoxin.

It is recommended that a dose of 10 units be injected as soon as possible after the initial chill, and repeated every eight hours except in bilateral pneumonia and in cases with severe toxemia in which injections of fifteen to twenty mils. should be given every six to eight hours. When the temperature, pulse, and respiration become normal, injections can be made every twenty-four hours until the lungs begin to clear up.

Eli Lilly & Company supplies Ampoules No. 28 Camphor in Oil. Each ampoule contains 10 mils. of solution, representing 36 grains of camphor. The fine reputation for quality enjoyed by Eli Lilly & Company, known as *THE Ampoule House*, is assurance to the physician that in specifying Lilly Ampoules there can be no doubt of the therapeutic activity of the preparation.

Our readers are referred to Eli Lilly & Company for further information on this or other subjects pertaining to ampoule medication. It is said that this concern offers the most complete line of American-made ampoules to be found in this country.

PLURIGLANDULAR THERAPY

The systematic administration of pluriglandular extracts open a new era in organotherapy. Hitherto efforts in glandular medication have been for the most part confined to a restricted field, that of giving the extract of a single gland where that particular gland has shown evidence of failure in function. But it is now known that no gland of internal secretion can undergo derangement without producing changes in the functional capacity of the other glands with which it is interdependent. In no class of cases has this been better illustrated than in the asthenias, where the individual symptoms are only too evident.

Hormotone, a preparation containing thyroid, pituitary, ovary, and testis, has given splendid results in the treatment of asthenic conditions. Hormotone without post-pituitary is recommended for the neurasthenic conditions associated with high blood-pressure and all hypertensive conditions. These preparations are giving splendid results, and we welcome the inclusion of the manufacturers, G. W. Carnrick Co., 17 Sullivan Street, New York, among our advertising patrons. They will be glad to supply physicians who are interested in these preparations with trial packages, and we trust our readers will avail themselves of this invitation.

TREATMENT OF PNEUMONIA

Many months ago, writes Leonard Williams in the "Practitioner," London, a friend said to me, "How do you treat pneumonia?" Having never completely divested myself of my truculent mid-Victorian training I replied, "With Faith, Hope and Charity. Faith, in the medicatrix nature, Hope, for the absence of complications, and Charity with those who differ from me."

"You don't give Digitalis?" "No."

"Nor Calcium?" "Neither."

"Not even thyroid?" "Animal farceur!"

"And you make no local applications to the chest wall?" "Never."

"Then you are wrong. Listen."

And, being a willing listener, I listened. Some twenty years ago he had seen much hospital work in Paris. At that time in the treatment of Pneumonia the practice of many of the French physicians was to blister the affected side, and he had satisfied himself that the case thus treated did better than those in which the blistering was omitted, and he adopted the practice in England. After a time, however, largely on account of the objections urged by the patients and their friends to the pain and discomfort produced by the blisters, he rather reluctantly ceased to apply them and reverted to the "expectant" method in which he had been nurtured. Time went by, and one day he received an advertisement of a preparation known as Antiphlogistine, for which it was claimed that when applied to the affected side in Pneumonia, either lobar or catarrhal, it had the effect of reducing the temperature, slowing the pulse-rate and promoting sleep without any additional treatment. With the memory of his blistering days full upon him, he decided to give it a trial. His experiences were such as to give him encouragement, and to bring him near to believing that not all men, not even all American advertisers, were necessarily liars. . . .

I decided to turn my attention to the claims of Antiphlogistine, which up to that time I confess to having regarded merely in the light of a convenient form of poultice, locally dehydrating, decongestioning and comforting, but probably innocent of any effect upon pulse rates and temperatures. Here again, one case in the history of my conversion must suffice.

In November of last year a young Belgian of 20 years was admitted into the French hospital with a temperature of 104 deg., a quick bounding pulse, slight cough and severe pain in the left side. On admission physical examination was negative. The following day his nose bled, but neither I nor the resident—an experienced Belgian doctor—could detect any signs in the chest. That night he was delirious and coughed a great deal. On the following day he voided some sticky sputum which was typically rusty, and developed labial herpes. Physical examination now revealed the classical dullness and tubular breathing over the lower lobe of the left lung for which I had been looking. His temperature was 105 deg. At about 4 P. M. a gamgee jacket thickly spread with Antiphlogistine was applied over the whole chest. The following morning his temperature was normal.

Now, I do not pretend to explain these happenings; for the benefit of the open-minded, I content myself with recording them. The clinician must protect himself against the sneers of the laboratorist. That we are unable to follow the processes by which a healing measure produces its effect is a sorry reason for discarding it. The search for a scientific explanation is a laudable and, academically, an interesting adventure, but in practice it is but a sleeveless errand. Trousseau, probably the greatest clinician of any time, has expressed in characteristically simple words the only position proper for us to adopt: "*Je ne vois en thérapeutique que deux choses: le médicament appliqué à l'organisme, et le résultat éloigné de cette application. Quant aux phénomènes intermédiaires, ils nous échappent, et nous échapperont probablement toujours.*" Who can explain the process by which digitalis works its wonders; and what advantageth him who can?

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, FEBRUARY 15, 1918

No. 4

PREVENTIVE MEDICINE IN RAILWAY WORK*

By JOHN M. DODSON, A. M., M. D.

Dean of Rush Medical College
CHICAGO, ILLINOIS

Members of the "Soo" Surgical Association:

Custom has decreed that at some time during the annual meeting the President shall perpetrate an address on some topic pertinent to the work of the members. At the suggestion of our Secretary, this meeting, as you know, was arranged to be purely clinical in character. It has been somewhat difficult, therefore, for me to discover a suitable interval for such an address, and this occasion of our annual banquet seemed the only one available.

As our meeting is devoted to surgical clinics and has been arranged at the time of the Clinical Congress of Surgeons, which many of you will attend, you will have a surfeit of surgical diet this week, and I venture, therefore, to take as the theme of this address a non-surgical topic. We have had the opportunity this afternoon, through the kindness of my friends, Drs. Mock and Oliver, and the generous invitation of Sears, Roebuck & Co., to visit the department of Industrial Medicine in their extensive plant. This department is perhaps the best, as it was one of the first exponents of preventive medicine in the industries in this country, and is a model of its kind, a model which many other commercial and manufacturing firms are adopting. In arranging for this visit as a feature of this meeting, I had in mind to take it as a text for this paper on preventive medicine in railway work.

*Address of the President of the "Soo" Surgical Association at the annual meeting, October 22, 1917.

I believe there is here a large field of usefulness for the physician in the service of the railroad company, quite apart from his usual duties of emergency surgeon. The department which we have seen in operation this afternoon is one of the best organized and most efficient expositions of preventive medicine, as applied to industrial communities, now in existence.

The enormous advance in the medical sciences of the last half century since the discoveries of Pasteur, has yielded practical results almost wholly in the domain of preventive medicine. This statement is so obvious and so generally recognized that argument in its support seems hardly necessary, but a brief recapitulation of some of the more salient facts will serve as a foundation for certain deductions.

In listing the accomplishments in the field of curative medicine one naturally calls to mind the great advance in surgery, but even here the great triumphs of aseptic surgery have been due to our ability to exclude pyogenic germs from the operation field, to prevent wound infection rather than to dissipate it after it has once occurred; modern surgery, in short, is made possible by preventive rather than by curative measures.

Turning to the field of internal medicine there comes to mind, first of all, the antitoxin for diphtheria, unquestionably the greatest triumph in the field of therapeutics. The antitoxic serum for this disease is an almost absolutely dependable

curative agent when promptly and properly used. It has converted one of the diseases most dreaded by the old-time practitioner into one which the physician approaches with confidence that he can arrest its course. This great discovery by Behring and Kitasato, a quarter of a century ago, aroused great hope that similar antitoxic sera would be found for the other infectious diseases, or, if not, that the creation of active immunity by vaccines would prove equally efficacious. That hope has not been realized. It is true that in the serum for epidemic cerebrospinal meningitis we have a therapeutic agent which, though not so infallible as diphtheria antitoxin, has greatly lessened the mortality from this disease, and to a much lesser degree the serum of Flexner for the rarer influenzal meningitis has proven effective. To these must be added the Pasteur treatment of hydrophobia; but these comprise practically all that has been gained by antitoxic sera in the field of therapeutics. The serum for tetanus, as has been abundantly shown in the present war, is very effective as a preventive measure, quite unreliable when used after the symptoms of the disease have appeared. The numerous sera and vaccines for other diseases,—pneumonia, the pyogenic infections, scarlet fever, pertussis, and others,—have failed to realize the hopes entertained in regard to them; sometimes they have seemed to be helpful, much more often they are not.

The remarkable discovery of salvarsan ("606") by Ehrlich, was notable quite as much for the intensive and accurate scientific research by which the discovery was made, as for its efficacy against the spirocheta of syphilis. Here again, however, the hopes that were aroused by this discovery that the pharmacologist would find similar specific antidotes against the other infections, have not been realized.

In the presence of the vast majority of the most frequent, the most fatal, and the most dreaded diseases, the physician is about as resourceless as he was a century ago.

Contrast with these disappointingly meager achievements in therapeutics the enormous conquests of preventive medicine. Smallpox, formerly one of the most terrible scourges of the race, is so preventable by vaccination that the one nation which has rigidly enforced vaccination and re-vaccination has scarcely seen a case in the last half century. Typhoid fever, one of the most universal of infections, is so controllable by the protection of water and food supply, by the

proper handling of the patient and the occasional carrier, that its appearance in a community is as much of a disgrace and an evidence of criminal negligence to the people and the authorities of that community as it is a disgrace to the surgeon to have pus infection in a primary operation wound, and where conditions are such that it is impossible to guard these avenues of transmission, as in the trenches of the present war, a protective vaccine, available against typhoid and the paratyphoid infections, is so safe and so dependable that they have become practically non-existent in military life. Cholera, once a regular visitant to our shores, as to other countries, is all but forgotten as a possible epidemic disease; and yellow fever and malaria are so completely controllable that vast areas of the most fertile and desirable regions of the globe, especially in the tropics, have been made habitable for the Caucasian race. These statements are not matters of mere theorizing, but are facts which have been convincingly proven in civil life by the wonderful achievements of Gen. Gorgas in the Panama Canal Zone, as well as in other instances of less magnitude; in military life by the no less remarkable experience of the Japanese in the Jap-Russian war, and of all the armies engaged in the present world war.

Surely, there is no escape from the conclusion that the great field of usefulness for the medical profession in the near future lies along the lines of the prevention of disease, rather than of its cure. It is safe to say that, if it were possible to institute thoroughly and universally all the measures of hygiene and sanitation now known to us, the incidence of illness and death could almost be reduced to half its present magnitude.

And how is this immeasurably desirable accomplishment to be effected? In general, of course, by hygiene and sanitation, which we distinguish as of two classes: community hygiene, comprising all of these measures which the community, rural, municipal, state or national, must take for its individual members through properly constituted health officers; and personal hygiene, which comprises that much larger body of things which the individual must do for himself.

In the field of Community Hygiene, or the Public Health Service, we have made some progress in the larger cities, but in the smaller cities and in the villages and rural communities of most of the states, provision for health service is shamefully inadequate and ineffective. It seems certain that for a long time to come such com-

munity hygiene work as is done must be performed, in so far as possible, by industrial corporations of various sorts and other agencies.

But even when we have secured competent health officials in all our communities, manned by competent sanitarians, especially trained for such service, and devoting themselves exclusively to it, amply supplied with the necessary assistance, equipment, and supplies, and with power to enforce sanitary regulations—even then no large measure of effectiveness can be obtained without the hearty, intelligent co-operation of the individual citizen. Moreover, the large part of the body of sanitary rules and practices necessary to be observed to insure the fullest measure of health in any community, must always belong to the domain of personal hygiene. To secure widespread observance of these is mainly a matter of education and close supervision by the family physicians and the physicians engaged in looking after the health of large bodies of persons, grouped together in an establishment, such as we have visited this afternoon, or engaged in a common employment, such as the employees of a railway company or similar corporation.

Because of this the creation of this new specialty of Industrial Medicine, which found fullest expression in the organization of a National Association of Industrial Physicians in Detroit a year ago,—a movement largely initiated and brought to fruition by the efforts of Dr. Mock,—is one of the most significant and promising developments in medicine of recent years. May I call attention to and emphasize some important features of the Industrial Medicine Department of the Sears, Roebuck & Company plant to which Dr. Oliver has already alluded? First, it is not a philanthropic enterprise. Mr. Rosenwald, the president of the company, to whose broad vision and firm grasp of the accomplishments of modern medicine the creation of the department is primarily due, lays great stress on the fact that it is a dollar-and-cents proposition, maintained because it yields results which show on the credit side of the balance sheet. It is good business. Secondly, it is a preventive-medicine, not a health-insurance, affair. The energies of the medical staff are devoted to keeping their employees well, not to caring for them when they are ill. The physical examination of applicants for employment, to insure that no one undertakes work for which he is unfit and that he harbors no communicable disease which might be a danger to fellow employees, their re-examination, from time

to time, to detect, in their incipency, any signs of disease or breakdown,—the rendering of first-aid in cases of accident, to prevent infection and other results of neglect,—the education of the employees in the care of themselves—all these are distinctly measures of prevention, not of the cure, of disease, such actual, sustained care as is rendered to the few who could not otherwise obtain it, being, though necessary, incidental and quite apart from the real functions of the department.

Health insurance, which is often confused with industrial medicine, is a totally different proposition. Like fire, accident, or life insurance, it is a device by which a group of individuals agree to share the risk of such inevitable illness or accident as may be suffered by individual members of the group, by dividing the cost of such illness equally among the whole number. Thus the loss from such a calamity which might fall with crushing weight on the individual, is made easy because it is spread over a large number,—is shared, in other words, by the more fortunate members of the group and usually also by the employer, sometimes also by the State. Such health-insurance is not in any sense preventive medicine, although every health-insurance association is naturally and keenly interested in the operations of an industrial-medicine department affecting its members. The more successful such a department proves in the work of preventing illness, the lighter will fall the burden of indemnities for illness and injury on the health-benefit or insurance company.

Let me cite one example showing the possibilities of such a department in this connection: Some of you may have read Dr. Mock's report detailing his experience with hand-infections. One of his first observations was the frequency of hand-infections among the employees, often from trivial but neglected injuries. The number of working days lost from these infections totaled a very considerable sum. He caused small bottles of iodine with little applicators to be placed all about the plant, with clearly printed placards in the several languages spoken by the employees, instructing them that when one sustained an injury to the hand,—cut, scratch, crush, or what not,—he was at once to apply the tincture of iodine and report to the medical department. In one year the total loss of days from infected fingers and hands fell to about 20 per cent ($\frac{1}{5}$) of what it had formerly been. A health-insurance organization among these employees would

have been greatly pleased over this result, relieved as it would have been from the payment of indemnities for many weeks or months of hand-infection, but the measures instituted by Dr. Mock to prevent these infections were not "health insurance," but preventive medicine. The expense of this procedure and of the department of industrial medicine, which carries out this and similar measures of prevention of accident and disease, is properly a burden on the corporation, the cost of health-insurance being properly chargeable to the employees participating in its benefits, at least in part.

Can such service as is performed by these industrial medicine departments in large manufacturing and mercantile establishments be carried on among railway employees? In some groups, such as the large repair-shops and construction-crews, the conditions are not essentially different from those observed in any industrial plant, large numbers of employees being assembled in a common working-place under conditions common to all. In such groups the operations of an industrial-medicine organization are naturally the same as in such a plant as we have visited today. The supervision of the sanitary conditions which surround the workmen, such as have to do with the sanitary location, construction, arrangement, and conduct of the shops or construction-camps; the provision of good light, ventilation, water supply, food, safety appliances, and the like; the physical examination of applicants for employment and the re-examination of employees at suitable intervals; the rendering of first-aid and the giving of advice as to best disposition of the injured or ailing employee to secure his most speedy restoration to health and full-working capacity; the education of employees and of their families in matters of hygiene and sanitation—these can all be carried out readily. Indeed, some of these measures are already being carried out in our own and other railway lines, by none, however, in any such degree, or with such effectiveness as by some of the industrial corporations.

Is it possible to extend a similar service to the widely scattered employees of other types,—trainmen, yardmen, and depot and other men? I believe that much could be done along these lines, even among these classes of railway employees, and that a large service could thus be rendered by the railway surgeon,—perhaps he might better be called the railway doctor,—to the railway men and their families, and indirectly to the communities in which they live. I am sure it would pay the railroads to compensate their medical men for such work as this, and that, once organized and in thorough operation, such work would lessen very much the incidence of disease, as well as of accident and the resulting indemnities. I believe it would pay the railroads to organize such a service, or, rather, to expand the service of the "railway surgeon" so as to include these functions of preventive medicine.

Of one thing I am sure, after seeing in operation such an effective department of industrial medicine as we have visited today, and knowing the large returns which it yields in health and happiness to the employees who are thus cared for, as well as in pecuniary advantage to the employer—I am sure that the feasibility of similar service in railway lines is worth inquiring into carefully; and so, gentlemen of the Association, I venture to suggest to the incoming administration that a committee be appointed to investigate the matter and to report at the next meeting. I think we are justly proud of the splendid association which has been built up, largely through the efforts of our Chief Surgeon and Secretary. The quality of the papers which are presented at these meetings compares very favorably with those of any similar organization with which I am acquainted. I think it would be a fine thing if we could initiate a nation-wide movement for the introduction of preventive medicine, in a thorough and effective way, into railway work, and thus extend to the millions of persons comprised in the railway employees and their families the greatest benefits of modern medicine.

PELLAGRA: A REPORT OF FIVE CASES*

By CHARLES T. GRANGER, M. D.

ROCHESTER, MINNESOTA

Pellagra is rarely seen in this part of the United States, only eight or nine cases having been reported in Minnesota. It is for this reason that the five cases I have had under observation are brought to your attention.

In the beginning, we are forced to admit that as yet the cause of pellagra and its mode of contraction are unknown. It is probably not contagious nor hereditary. There is no reasonable proof that it is communicable. Griffin's conclusion is that it is hereditary in the sense of an inherited morbid tendency. The disease is spread by susceptible individuals contracting it from the same source. Howard, after treating a great many hundreds of cases, asserts that the cause is not known, but that it is transmissible.

The agnosticism of the classification of pellagra as a disease of "unknown origin" contrasts markedly with the claims that pellagra is caused—

- By contagion
- By eating corn products
- By insect bites
- By restriction of diet
- By colloidal silica in drinking-water
- By the streptobacillus pellagræ
- By the eating of sugar-cane or its products
- By infection from the stable fly
- By cotton-seed oil.

The Public Health Service announced through the United States Treasury Department on November 12, 1915, that pellagra was caused by insufficient proteid diet; and that at a convict camp at the Mississippi State Penitentiary eleven male convicts who had been fed on a restricted, mainly carbohydrate, diet, developed pellagra before the expiration of five months. The diet used lacked meats, milk, eggs, beans, peas, and similar proteid foods. The disease did not develop in twenty similar cases controlled similarly in every respect except as to diet.

A monotonous diet,—beans in the Southwest, corn in Italy and the South, and bacon and various cereals in the West,—produces a lack of vitamins, or whatever is necessary to maintain dietetic equilibrium; and the result is the scurvy of dry land, a chronic semistarvation disease which is probably aggravated by too intense sunshine, various infections, bad drinking-water, and perhaps other unknown factors.

The South has not taken very kindly to the unbalanced-diet theory, and a constant effort has been made there to prove pellagra an infection, but with little success.

Pellagra is as protean in its manifestations as malaria, tuberculosis, or hysteria; its symptomatology is complex; and its etiology is baffling. Its zone is constantly widening.

The ingredients of semidrying oils are accused of producing pellagra. Mizell declares that the ingestion of cotton-seed, maize and sesame oils in large quantities, which cannot be disposed of normally, produces pellagra. These oils, he states, are stored as neutral fats; and, as a result of their oxidation, deleterious products are formed which institute the disease. This conclusion is reached from the fact that by means of potassium permanganate, linoleic acid is oxidized to sativic, azelaic, and ultimately to isolinusic acid and aldehyd, according to the strength of the solution. The same reaction occurs, but more slowly, when lineolic acid is exposed to the oxygen of the air. Since the hemoglobin carries oxygen to the tissues, conditions in the body are comparable to those just mentioned. There is probably as good reason for accusing oleic acid of producing pellagra. Incident to the metabolic changes, the fats of the body, probably under the influence of a lipase or lipases, split into fatty acids and glycerol, and these are eventually oxidized to carbon dioxide and water; but of the intermediate products we know nothing, nor are we absolutely certain of the first step in the metabolism. In certain diseases, as in fevers, starvation and diabetes mellitus, where excessive fat and, to a certain extent, protein destruction occurs, acetone bodies are found in the urine. The beta-oxybutyric acid, which is probably derived from the fatty acids by further oxidation, forms acetoacetic acid, which, in turn, by loss of carbon dioxide, produces acetone. Dakin showed that the oxidation of the beta-oxybutyric acid is accomplished by means of a substance derived from the liver, but not contained within the liver cells.

The presence of lineolic acid has been demonstrated in the fats of many varieties of fish and game. Would it not be reasonable to suppose that the class of people who live largely on the flesh of such animals and on fish, should develop

*Read at the forty-ninth annual meeting of the Minnesota State Medical Association at St. Paul, October 11 and 12, 1917.

pellagra? The lecithin in the yolk of eggs contains lineolic acid. Why do not patients treated for tuberculosis with a diet containing many eggs, develop pellagra?

The number of cases reported in the North does not increase in proportion to the publicity given the disease, while, in the southwestern section of the country, the number of cases reported is exceedingly great, thus indicating that there is some factor at work in the latter locality which is absent, or present in an insignificant degree, in the former.

Mizell concluded, after an extensive study of the disease, that there were two types, viz.: one, biochemical pellagra, with a seasonal incidence; and the other toxicochemical pellagra, with non-seasonal incidence.

Raubitshek has noted the effect of rice diet on animals, and he says that this cereal is rich in fat, and by many is held accountable for the disease somewhat analogous to pellagra, namely, beriberi.

Lavinder, in commenting on Raubitshek's work, says the subject of photodynamic substances and their effects, is a large one. In a general way, a great number of fluorescent bodies, both vegetable and animal, which are harmless in the dark, have been shown to possess highly toxic properties in the light, especially direct sunlight. In this series of substances are found normal constituents of the human body, such as hematorporphyrin. In this connection there is an interesting condition and one which is now being studied, known as *fagopyrismus*. It arises in white or white-spotted animals fed on buckwheat, and exposed to the sunlight. It does not develop in dark animals kept away from the light. It occurs especially in lambs and swine, more rarely in cattle, and very rarely in horses. The symptoms will return every three or four weeks after discontinuance of the food if the animal be exposed to strong sunlight. In the winter the eruption is restricted to a mere burning and itching.

The symptoms.—The alliterative description of pellagra as a sequence of "diarrhea, dermatitis, delirium, and death," seems very apt.

Skin eruption: An erythematous rash, resembling sunburn and occurring on parts exposed to the sun, especially the backs of the hands.

Psychic phenomena: Mental depression is a constant symptom. It varies from a mild case of the "blues" to severe melancholia.

Pupil symptoms: Pupil symptoms are variable, and are due to involvement of the ciliospinal

center, located in the cord between the first and second dorsal vertebrae.

Pulse and temperature: Changes in the pulse and temperature depend upon the virulence. High temperature and rapid pulse denote a malignant type of infection.

Diarrhea: Diarrhea is present during some part of the disease, and its most pronounced feature is the extremely offensive odor. The stools frequently contain both blood and mucus.

Stomach: The stomach symptoms are frequently pronounced. Other mucous membranes are also inflamed, as may readily be demonstrated by proctoscopy.

Tongue: The tongue and mucosa of the lips become very red. This redness may be seen extending into the pharynx. The tongue, denuded of its epithelium, is smooth and glistening. Its color is a cardinal-red, and it is a diagnostic sign-post on this account.

Pelvis: The poison of pellagra is liable, especially in women, to involve the pelvic organs. Where the eruption is not present, the unsuspecting doctor is most likely to pronounce the case pelvic, and treat the symptoms as pointing to a primary gynecological trouble without thinking of its being a part of the pellagrous symptomatology. In one of the Insane Hospitals in South Carolina, five patients with pellagra were admitted in one week, all of whom had been operated on for gynecological trouble within the preceding two months, and all of them had, at the time of admission, developed the typical objective pellagrous stigmata.

Treatment: From observation of cases in the South, one concludes that many mild cases respond satisfactorily without any drug administration. The dietetic, hygienic, and climatic treatments not proving effective, one turns to arsenic in its various forms, even to salvarsan, to quinine intravenously, to thymol, and to intensive elimination. Silver nitrate followed by alkaline mouth-washes improves the sore mouth. The anemia of the disease improves under the administration of iron. The gastric distress is relieved, in the majority of cases, by dilute hydrochloric acid, followed by bitter tonics. The diarrhea is relieved by bismuth salts, resorcin, and the preparations of tannin. The skin-lesions are more obstinate to treatment than the non-pellagrinous manifestations of like intensity.

My first case was seen in 1912, and the home of the patient was in North Dakota.

CASE 1.—Mr. G., a farmer, aged 46, had a history of an illness extending over about five years. He had

been advised that his trouble was a carcinoma, and again that he was tubercular. He called for the relief of a severe burning and itching rash on his forearms and hands, involving the dorsal surfaces. His weight had decreased about 35 pounds. Blood-examination showed as follows: red cells, 3,030,000; white cells, 7,200; hemoglobin, 50 per cent. The stained specimen showed achromia, slight poikilocytosis, many off-colored cells, and some nucleated red cells. The stools were discolored, and gave a well-marked reaction to guaiacum. Urinalysis showed the presence of a few granular casts and indicanuria. He ran a temperature of 103° F.; was extremely depressed, part of the time refusing to answer questions; and he had a diarrhea with the characteristic odor. This patient was under observation for about three months, and died July 3, 1912. During the last days of his illness he had an extremely high temperature, and was in coma.

CASE 2.—Mrs. E., widow, aged 65, a resident of Rochester for about twenty-five years. I first attended her in the spring of 1912 for what I assumed to be pernicious anemia, as the blood-picture somewhat resembled this type of anemia, and she had the peculiar lemon-yellow, waxy cachexia common to it. She had an obstinate diarrhea, which did not improve under treatment. After a test-meal the gastric contents showed an anacidity, and the urinalysis was negative with the exception of the presence of an indicanuria. In the late fall of 1912, she improved very much, but became ill again in the spring of 1913, and was much troubled with the diarrhea. She also exhibited marked mental changes. She was taken out in the sun as the warm days came on, and in June she developed the typical erythematous rash, covering the extensor surfaces of both hands and forearms and one side of the neck. Her tongue and buccal mucosa were typical of the disease.

Drs. Bracken and Chesley saw this patient, and she was also seen by Drs. Sutton and Hoard of Texas, all of whom confirmed the diagnosis. This was the first case of pellagra known to have originated in Minnesota. This patient gradually became emaciated, her mental condition became more cloudy, and she died in November, 1913.

CASE 3.—Mrs. E., widow, aged 77, born in Scotland. She was a resident for many years of Massachusetts, but had been living for the past four years in Minnesota. She had never lived in the South. Her present illness began about two years before with an attack of diarrhea and some vague mental symptoms, mostly a mental apathy. Stomatitis has been a constant symptom. The tongue was glazed, and denuded of its epithelium. On the extensor surfaces of the arms were symmetrical pigmented areas, and one small patch on the dorsal surface of the left hand, which she complained of as burning at times. She lay in an apparent stupor with half-closed, expressionless eyes and open

mouth. There were a bilateral ptosis and a very marked mental deficiency. She did not answer questions readily, and complained of vertigo and cephalalgia. There were a severe proctitis and a diarrhea with a very offensive odor. The last week of her life, she ran a high temperature. At one time it registered 105° F.

This case was seen by different members of the Mayo Clinic, by Dr. W. P. Greene of the State Board of Health, and by my associates, Drs. Booker-Granger, Squires, Hewitt, and Guilmette. The patient died March 4, 1916.

CASE 4.—W. Y., colored, laborer, called for medical aid in May, 1917, on account of an intolerably painful burning rash on the extensor surfaces of his hands and arms, affecting, to a lesser degree, his cheeks and chin. He was a native of Tennessee, and his present illness began about six years ago. With the advent of the warm weather, he has had a rash and a period of sickness; and at the second and third appearance of the rash he had a diarrhea. Six years ago his weight was 170 pounds, and at the end of May, 1917, he weighed 148 pounds. He kept to his bed most of the time, and was extremely irritable.

This patient left Rochester early in July, and was somewhat improved at that time.

CASE 5.—Mrs. D., aged 28, was a native of Louisiana, but she had been living in Texas for several years, and has been in Minnesota for a year and a half. I saw her in July, 1917, when she was suffering from a diarrhea, which had been persistent since July, 1916, with but a few short periods of intermission. Three weeks later, she developed the peculiar gauntlet-like rash on the hands and forearms and on the back of the neck, and also a patch on the flexor surface of one elbow. She was depressed, and kept to her bed much of the time. The tongue and buccal mucosa were typical of pellagra, and the urine showed an indicanuria. The diarrhea was very offensive, and persisted in spite of treatment. This patient was seen in August by Drs. Chesley and Burns of the State Board of Health. On October 1, the date of the last examination, showed the following conditions: She had evidently emaciated considerably. She thought her weight had decreased about twenty pounds. The back of the neck and dorsal surfaces of the hands were covered with pigmented areas, of which the distribution was characteristic and pathognomonic. On the hands, the dorsi only were involved. The skin was somewhat hypertrophied, and the terminal phalanges uninvolved, and there was some evidence of epidermal exfoliation. She had a ptosis of the left lid, and the pupils were sluggish. The epitrochlear glands were enlarged, and anorexia was a constant symptom. There was some exaggeration of the deep reflexes. Romberg's sign was active and the Babinski was negative. The patient's mental abstraction was marked.

INVESTIGATION OF LAKE CALHOUN PUBLIC BATHS, MINNEAPOLIS, MAY TO NOVEMBER, 1917

By H. A. WHITTAKER

Director Minnesota State Board of Health, Division of Sanitation

FOREWORD

This investigation was taken up primarily because statements had been made to the effect that certain individuals had been infected at the bathing-beach at Lake Calhoun. Inquiries were made in order to reach, if possible, such parties, but no one could be found who could be considered as suffering from an infection received at the bath.

Various plans for epidemiological study in connection with this bathing-beach were discussed. The one finally determined upon was notification through the press for any individual who thought he or she had become infected at the bathing-beach to advise the State Board of

and Lake Calhoun, in relation to certain environmental factors which might affect the health of the bathers. The survey of the bathing-pavilion consisted of a study of its arrangement, equipment, and the method used in handling the bathers; while that of Lake Calhoun involved a sanitary survey of the water-shed, and analytical examinations of the water.

BATHING-PAVILION AND BATHING-BEACH

The bathing-pavilion is located on the north shore of Lake Calhoun, adjacent to Calhoun Drive and Lake St., in the city of Minneapolis. The building is a one-story structure with a small basement. It is constructed of concrete, brick, and tile. The building is divided into a number of rooms, including a shelter, lobby, office, hospital, suit-rooms, courts (dressing- and



Fig. 1. View of Calhoun Bathing-Pavilion. Taken from the lake.

Health promptly of such possibility in order that a thorough study of the facts might be made.

As a result of this advice only two notifications came to the Division of Preventable Diseases of the State Board of Health. Both of these proved to be non-infectious in nature, and had nothing whatever to do with bathing at the beach. Nothing was presented during this study at Lake Calhoun that called for further investigation from an epidemiological point of view.

It is for this reason that nothing bearing upon such a possibility has been represented in this report.

December 27, 1917.

H. M. BRACKEN, M. D.,

Executive Officer.

This investigation includes a sanitary survey of the public bathing-pavilion, the bathing-beach,

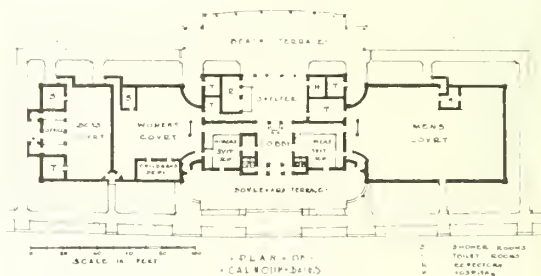


Fig. 2. Plan of the Calhoun Pavilion.

locker-rooms), shower-rooms, and toilets. (See Figs. 1 and 2.) The hospital is equipped with instruments and medical supplies for first-aid work. The suit-rooms are provided with racks for storing bathing-suits, towels, and other supplies. The courts are uncovered rooms, exposed to the air and sunlight. The women's court contains 228 lockers and 28 dressing-rooms, and a children's department with 66 lockers. The men's court contains 1,130 lockers and 62 dressing-rooms, and the boys' court, 404 lockers. The lockers are constructed of sheet-iron, while the dressing-rooms are small wooden compartments. The dressing-rooms in the women's court are provided with a door. Each court is provided with a shower-room; the women's containing 8 showers; the men's, 8 showers; and the boys', 4 showers. Two toilet-rooms are available for women, two for men, and one for boys. One toilet for men and one for women are accessible from the outside of the building. The other

toilets can be reached through their respective courts. The entrances to the courts and the exits to the street are provided with turn-stiles. The exit and entrance to and from the courts to the bathing-beach are equipped with water-sprays, which play from three sides of the doorway to prevent persons who are wearing street clothes from entering the courts. Each of these doorways is provided with a foot-bath to remove beach sand. The bathing pavilion is designed to accommodate 6,000 bathers during a period of fifteen hours. A building attached to one end of the pavilion is used as a refectory. It is equipped with a kitchen, lunch-counters, etc. The pavilion and refectory are supplied with city water. Seven public drinking-fountains are located in convenient places inside and outside of the pa-

bathing area extends 250 feet into the lake and 450 feet along the shore. The quantity of water within the bathing area is estimated at approximately 3,000,000 gallons. The beach is covered with sand of such a size and weight that it will settle quickly after being disturbed by bathers. The beach is well lighted with electric lights, so that the baths can be used during the evening.

METHOD OF CONDUCTING BATHS

The personnel at the bath consists of a superintendent, assistant superintendent, 2 cashiers, 8 life-guards, 7 men attendants, 4 women attendants, 2 matrons, and 2 to 4 laborers. The pavilion and bathing-beach are constantly under the direction of a superintendent, attendants, and life-guards. During the regular bathing season, the pavilion is open from 7 A. M. to 10 P. M. Persons desiring to use the bathing-pavilion must purchase a ticket at the ticket office, enter the turnstile leading into the passageway adjacent to the suit-room, where a locker key is assigned and a bathing-suit or towel may be obtained. A charge of five cents each is made for a locker, towel, and bathing-suit. Valuables may be checked before entering the court. The bather is then admitted to the court, and locates the locker assigned. No limit is placed on the time a locker may be used by the bather unless the bath is crowded, when a half hour limit is placed for men and a two-hour limit for women. Showers are provided for those who desire to use them before entering or on returning from the beach. Before leaving the pavilion, the bathers must pass the checker, and return the supplies obtained on entering the bath. Clothes-wringers are provided for removing surplus water from the suits of those using their own garments. The soiled suits and towels are placed in piles, and later packed in bags and sent to the laundry. The Board of Park Commissioners has passed certain regulations regarding the kind of suits permissible to wear at the baths, but these rulings apply more to the question of public decency than to any particular standard of texture or design.

LAUNDRY FOR PUBLIC BATHS

The Board of Park Commissioners maintains a laundry at the Camden Public Baths, which has a capacity of about 1,000 pounds (dry weight) per day, which would represent about 1,000 women's suits and 1,800 men's suits. During the rush season this capacity is inadequate, and part of the laundry work is done by commercial con-



Fig. 3. View of Calhoun Bathing-Beach.

vilion. The water supplied to these fountains is obtained from a drilled well 256 feet in depth, which is located in the basement of the pavilion. A field survey showed this water supply to be constructed properly from a sanitary point of view. The buildings at the bathing-beach are connected with the city sewerage system. No sewers or drains from these buildings discharge into Lake Calhoun.

The bathing-beach is located immediately in front of the pavilion. It is divided into rectangular sections by a series of ropes. (See Fig. 3.) The section adjacent to the shore includes water from 0 to $2\frac{1}{2}$ feet in depth, and the next section includes water from $2\frac{1}{2}$ to $4\frac{1}{2}$ feet in depth. Two diving-piers and two diving-scaffolds are located beyond the outside ropes. The depth of the water at the diving-piers is about 7 feet, and at the diving-scaffolds, about 10 feet. Five observation-platforms for life-guards are located at various points along the outside ropes. The

cerns. The method of washing at the Camden laundry consists of placing about fifty pounds (dry weight) of material, which consists of bathing-suits and towels, into a revolving washer with hot water to which has been added a solution containing 1.5 oz. of calcium hypochlorite (chloride of lime—available chlorine content 0.5 oz.) and 3 oz. of soda ash (washing-powder). The material is washed in this solution for ten minutes, and the liquid removed. Cold water is added, and the washing continued for ten minutes. It is then placed in a centrifugal machine, and the surplus liquid removed. Following this the suits and towels are hung on racks, and dried in a hot-air dryer. When the drying is completed, they are placed in sacks, and returned to the bathing-pavilion. Experiments were conducted at the laundry on the method above described. These results are included in Table 1, which indicates that disinfection of the material is brought about during the cleansing process.

LAKE CALHOUN

Lake Calhoun is a small body of water located within the city limits of Minneapolis. Its area is approximately 469 acres, and its maximum depth about 90 feet. It belongs to a small water system which is tributary to the Mississippi River. This system includes Cedar Lake, Lake of the Isles, Lake Calhoun, and Lake Harriet. These lakes are connected by natural or artificial channels in the order mentioned, the latter emptying into Minnehaha Creek, which discharges into the Mississippi River. The water-sheds of these lakes are relatively small; consequently, their water supply is limited, and the movement of water from one lake to the other is very slight at certain seasons of the year. Surface drainage reaches these lakes over the surface of the ground and through storm-water sewers. So far as could be determined by inspection and from the statements of various city officials,^{1, 2} no sewers receiving domestic sewage discharge into Lake Calhoun. During recent years, the entire shore of this lake, except that portion between Thirty-fourth Street and Lake Street, has been dredged and filled with sand. The filled area is said¹ to be from 100 to 300 feet wide and 5 to 25 feet in depth. During this dredging work no sewers were encountered in the areas mentioned. Between Thirty-fourth Street and West Lake Street, a sewer, connected with the city system exists, which receives domestic sewage from the residences in that district; consequently, there would be no logical reason for any lake connec-

tions in this area. Surface drainage may carry into the lake any pollution which exists on its water-shed, while the use of the lake for pleasure purposes, especially bathing, serves as a direct means of contributing human pollution. These factors of pollution are mentioned to bring out the fact that the water from this lake is not in any sense a safe water to be used for drinking purposes. Public bathing is practiced at various points on the lake in addition to the public bathing-beach. The principal points where bathers were frequently observed during this investigation are the east and south shores.

ANALYTICAL RESULTS

The analytical examinations made on the Lake Calhoun water include bacteriological, physical, chemical, and microscopical determinations. The laboratory methods used in this work are those recommended by the Laboratory Section of the American Public Health Association, 1917.

Sampling stations were established at a number of different points on the lake for the purpose of obtaining information on the character of the water in various parts of the lake for comparison with that collected at the bathing-beach. These sampling stations were located as follows:

- No. 1 Center of the lake.
- No. 2 Calhoun bathing-beach, 100 feet from the shore.
- No. 3 Calhoun bathing-beach between diving-piers.
- No. 4 One hundred feet east of Calhoun bathing-beach enclosure.
- No. 5 One hundred feet west of Calhoun bathing-beach enclosure.
- No. 6 Two hundred feet from west shore.
- No. 7 Two hundred feet from south shore.
- No. 8 Two hundred feet from east shore.

Samples were collected once a week at Stations No. 1, No. 2, No. 6, No. 7, and No. 8, during the period covered by the investigation, and from all stations during the intensive tests. The bacteriological samples were collected by means of the standard sampling device³ used by this Division.

The bacteriological results obtained during this investigation have been arranged to show (a) the average monthly results obtained during the entire period covered, and (b) the results obtained during the twenty-four-hour period of intensive study.

The physical and chemical examinations have been tabulated as average monthly results. The microscopical examinations have been embodied

in a statement which explains the significance of these results.

Meteorological data have been recorded for these periods for the purpose of determining their relation, if any, to the analytical results. The meteorological data for the months during which the investigation was in progress are recorded in Table II. The average monthly bacterial counts at the principal stations are recorded in Table III. The counts were made at 20° C. and 37° C. for the purpose of comparison, but the 37° C. counts have been used in the comparative interpretations, as they are assumed to be more representative of the pollution of animal origin.

the month of May, before the bathing season opened; but during the month of June there was a rapid increase in the bacterial count at Station No. 2. Station No. 1 was not materially affected until the month of August, when the influence of the general pollution began to affect the entire lake to a limited extent. It should also be noted that, following the bathing season, which closed September 6, the bacterial counts soon returned to normal. Examination of Chart 1 shows that the curve representing the bacterial count for Station No. 2, located at the bathing-beach, and that representing the number of bathers follow the same general course.

TABLE 1. RESULTS ON LAUNDRY OF BATHING MATERIAL—CAMDEN LAUNDRY

Exp. No.	Material Washed (pounds dry wt.)	Chemical added (ounces)			Bacteriological Results on Wash Water					
		Hypochlorite	Available Chlorine	Washing Pwd. (largely soda ash)	1		2		3	
		Chemical			Bact. per c.c.	B. coli. 1c.c. 100c.c.	Bact. per c.c.	B. coli. 1c.c. 100c.c.	Bact. per c.c.	B. coli. 1c.c. 100c.c.
1	50	1.5	0.5	3.0	0	0	0	0	0	0
2	50	1.5	0.5	3.0	0	0	0	0	0	0

1. Hot wash water after chemicals were added, but before material was placed in washing machine.

2. Hot wash water after chemicals and material were added, and washing machine rotated for 10 minutes.

3. Cold rinsing water after 10 minutes washing of material in machine.

TABLE II. METEROLOGICAL DATA AND THE NUMBER OF BATHERS DURING THE MONTHS INDICATED

Month	Wind		Precipitation, inches	Sunshine (per cent of possible)	Temperature F.°		No. of bathers (2)
	Prevailing direction	Average velocity			Air (3)	Water (1)	
May	N	10.6	4.24	67	54.6	61	...
June	NW	11.7	3.77	54	63.3	72	18,282
July	SE	10.5	4.06	72	73.0	81	90,568
August	NW	11.0	2.83	72	67.4	77	27,951
September	S	10.2	2.16	58	60.0	66	690
October	NW	13.7	1.70	34	38.6	54	...

1. Average of two readings per month.

2. Number of bathers passing through bathing pavilion.

3. Mean for the month.

TABLE III. AVERAGE MONTHLY BACTERIAL COUNTS AT 20° AND 37°C. AT THE PRINCIPAL SAMPLING STATIONS

Station No.	Bacteria per c. c. at 20°C.						Bacteria per c. c. at 37°C.					
	May	June	July	Aug.	Sept.	Oct.	May	June	July	Aug.	Sept.	Oct.
1	41	48	190	160	190	180	10	10	16	120	150	55
2	129	240	1300	350	290	130	34	95	600	210	135	55
6	100	40	160	250	875	180	30	5	35	140	550	47
7	90	120	300	200	250	190	24	55	80	85	125	55
8	95	350	375	275	275	130	28	42	85	85	120	44

Table IV was calculated⁴ from the average monthly results, which included determinations for B. coli in .001, .01, 0.1, 10, and 100 c.c. amounts on each sample collected. A graphic representation of the various factors which might affect the quality of the water during the period investigated is shown in Chart 1. It should be noted that the pollution indicated by the bacterial count at Station No. 1, the control station, and Station No. 2, at the bathing-beach, was relatively low during

The B. coli results shown in Table II follow the same general course shown for the bacterial counts. A study of the data represented on Chart 1 would indicate that the bathers are responsible for practically all of the increase in pollution indicated by the bacteriological results on the samples collected at the hours of the day when bathing was in progress.

The temperature curve follows the same general course as the bacterial count at the bathing-beach, and indicates a more favorable condition for the development of organisms in the water during the period of highest temperatures. Precipitation apparently has little effect in bringing about the rapid rise in the bacterial count during the bathing season, for it was equally as great prior to the bathing season without produc-

TABLE IV. AVERAGE MONTHLY RESULTS ON B. COLI EXAMINATIONS AT PRINCIPAL SAMPLING STATIONS

Station No.	B. coli group per c.c.					
	May	June	July	Aug.	Sept.	Oct.
1	.01	.01	.06	.64	.37	1.00
2	.01	1.00	5.50	6.30	.10	.01
6	.10	.10	.32	.62	1.00	1.00
7	.01	.01	2.80	2.40	.67	1.00
8	.01	.01	5.05	2.60	1.00	1.00

ing these marked results. The effect of sunshine was not sufficient to prevent the increase in count, although the percentage of possible sunshine had reached its maximum at the height of the bathing season. The average hourly velocity of the wind varied, but its effect was not sufficient to produce quick enough dilution or displacement to remove the contamination as rapidly as it was added to the water during the bathing hours. However, later results indicate that it is a most important factor in removing pollution from the bathing area.

that point. It should be noted that the turbidity and color were much higher during the month of May, which was prior to the bathing season, than during the succeeding month. A slight odor appeared during the month of July, and continued throughout the remaining months. This odor was not of sufficient intensity to be noticed by bathers.

The chemical results in Tables V, VI, and VII are quite comparable for the three stations recorded. These results show a moderately hard water, which usually contains a small amount of

TABLE V. AVERAGE MONTHLY PHYSICAL AND CHEMICAL RESULTS AT STATION NO. 1

Determination.	May	June	July	Aug.	Sept.	Oct.
Turbidity	10	5	5	5	4	3
Color	21	15	15	15	15	15
Odor	0	0	m-1	m-1	v-1	v-1
Total hardness	105	153	145	136	133	144
Alkalinity	156	148	141	128	132	141
Incrustants	0	5	5	8	5	0
Free ammonia .....	.028	.088	.032	.043	.054	.046
Albuminoid ammonia .....	.410	.364	.314	.324	.325	.340
Nitrites .....	.002	.001	0	0	0	0
Nitrates	0	0	0	0	0	0
Chlorine	5	5	5	4.2	4	4
Iron	0.4	0	0	0	0	0

TABLE VI. AVERAGE MONTHLY PHYSICAL AND CHEMICAL RESULTS AT STATION NO. 2

Determination.	May	June	July	Aug.	Sept.	Oct.
Turbidity	10	5	5	5	4	3
Color	26	15	15	15	15	15
Odor	0	0	m-1	m-1	v-1	v-1
Total hardness	113	155	146	136	139	148
Alkalinity	152	142	141	127	132	140
Incrustants	0	13	5	7	5	8
Free ammonia .....	.040	.084	.076	.056	.057	.056
Albuminoid ammonia .....	.430	.384	.371	.354	.328	.300
Nitrites .....	.003	.001	0	0	0	0
Nitrates	0	0	0	0	0	0
Chlorine	5	5	5	4.6	4	5
Iron	0.1	0	0	0	0	0

TABLE VII. AVERAGE MONTHLY PHYSICAL AND CHEMICAL RESULTS AT STATION NO. 7

Determination.	May	June	July	Aug.	Sept.	Oct.
Turbidity	10	3	5	5	4	3
Color	21	15	15	15	15	15
Odor	0	0	m-1	m-1	v-1	v-1
Total hardness	108	153	148	138	133	148
Alkalinity	156	148	152	127	132	144
Incrustants	0	5	7	11	5	4
Free ammonia .....	.030	...	.050	.044	.064	.048
Albuminoid ammonia .....	.298	...	.327	.315	.321	.280
Nitrites .....	.002	.001	0	0	0	0
Nitrates	0	0	0	0	0	0
Chlorine	5	5	5	2.6	4	4
Iron	0.1	0	0	0	0	0

A sanitary interpretation of the bacteriological results obtained on the water at the bathing-beach during the bathing periods would place it in the class of highly polluted waters and unfit for drinking purposes when judged by the standards set for drinking water.

The physical results, included in Tables V, VI, and VII, show the average monthly results for Stations No. 1, No. 2, and No. 7. Attention is drawn to the fact that the physical results for each station are quite comparable, thus indicating that the bathing at Station No. 2 did not materially affect the appearance of the water at

incrusting or boiler-scaling materials. The nitrogen content is relatively low, and it is largely present in the unoxidized form, which is often characteristic of surface waters during these months of the year. The iron content is very low during the month of May, and was not found present during subsequent months.

The microscopical examinations made during this period showed a marked development of *asterionella* and *fragilaria* in a shallow lagoon just north of Lake Calhoun during the month of June. These organisms began to pour out of the mouth of this lagoon into the channel between

Lake of the Isles and Lake Calhoun and were beginning to infect Lake Calhoun. The Board of Park Commissioners was advised to treat the lagoon with copper sulphate; and on the first of July 270 pounds of this chemical was applied. Practically all of these organisms disappeared during the following week. A few of these organisms were found in the water at Stations No. 1, No. 2, and No. 7 during the months of July and August, but not in sufficient numbers to be objectionable. Several other organisms were found in very limited numbers during the sum-

The meteorological data for the twenty-four hours indicate quite a variety of conditions in regard to temperature, wind, sunshine, and precipitation. These data for the twenty-four-hour period have been recorded in Table VIII.

The bacteriological results are recorded in Tables IX and X. Bacteriological examinations, which include bacterial counts at 37° C. and the number of *B. coli* per c.c., were made on samples of water collected every two hours at Stations No. 1 and No. 2; every four hours at Stations No. 3, No. 4, and No. 5; and every twelve hours

TABLE VIII. METEOROLOGICAL DATA DURING 24-HOUR TEST

Date.	July 22, 1917	July 22, 1917	July 22, 1917	July 22, 1917	July 22, 1917	July 22, 1917	July 22, 1917	July 22, 1917	July 22, 1917	July 22, 1917	July 22, 1917	July 22, 1917
Hour.	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12
Temp. F°	81	83	69	70	75	74	74	73	72	72	71	78
Wind	Direction NW	SE	E	N	NW	NW	N	N	N	N	N	N
Miles per hour	5	5	8	3	6	8	8	12	10	7	6	8
Precipitation	0	0	.67	.05	0	0	0	0	0	0	0	0
Sunshine (in tenths of hr.)	1.0	.8	0	0	.7	.4	.6	0	..	..	..	..
Sunset 7:51 P. M. Maximum wind velocity 2:41 P. M. N. W. 26 miles per hour.												
Date.	July 23, 1917	July 23, 1917	July 23, 1917	July 23, 1917	July 23, 1917	July 23, 1917	July 23, 1917	July 23, 1917	July 23, 1917	July 23, 1917	July 23, 1917	July 23, 1917
Hour.	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12
Temp. F°	69	68	67	66	66	66	68	72	74	77	80	82
Wind	Direction N	N	N	N	N	N	NE	NE	NE	NW	NE	NE
Miles per hour	9	5	5	5	5	6	5	7	8	11	9	9
Precipitation	0	0	0	0	0	0	0	0	0	0	0	0
Sunshine (in tenths of hr.)	..	..	..	..	.20	.8	1.0	1.0	1.0	1.0	1.0	1.0
Sunrise 4:48 A. M. Maximum wind velocity 10:53 A. M. N. E. 12 miles per hour.												

TABLE IX. BACTERIA PER C. C. AT 37°C. AT VARIOUS STATIONS DURING 24-HOUR TEST

Station	July 22, 1917							July 23, 1917						
	12M.	2PM.	4PM.	6PM.	8PM.	10PM.		12M.	2AM.	4AM.	6AM.	8AM.	10AM.	
1	15	34	17	11	46	29	15	20	4	30	24	6		
2	350	600	650	500	950	800	1300	150	160	180	150	56		
3	70	..	86	..	170	..	580	..	190	..	48	..		
4	95	..	80	..	375	..	650	..	400	..	200	..		
5	70	..	11	..	230	..	300	..	49	..	300	..		
6	60	..	..	..	..	..	40	..	..	..	..	..
7	8	..	..	..	..	..	200	..	..	..	..	..
8	42	..	..	..	..	..	175	..	..	..	..	..

TABLE X. B. COLI PER C. C. AT VARIOUS STATIONS DURING 24-HOUR TEST

Station	July 22, 1917							July 23, 1917						
	12M.	2PM.	4PM.	6PM.	8PM.	10PM.		12M.	2AM.	4AM.	6AM.	8AM.	10AM.	
1	.01	1	.1	1	1	1	.01	1	.1	.1	.1	.1	10	
2	1	10	10	100	100	10	10	10	10	1	1	1	10	
3	1	..	1	..	1	..	10	..	10	..	10	..	..
4	100	..	1	..	10	..	10	..	100	..	..	..	..
5	1	..	10	..	100	..	10	..	.1	..	..	..	..
6	.1	..	..	..	..	..	.1	..	..	..	..	..	..
7	.1	..	..	..	..	..	10	..	..	..	..	..	..
8	10	..	..	..	..	..	10	..	..	..	..	..	..

mer. Those worthy of mention were epithemia, vorticella, and daphnia.

In order to determine the immediate effect of the bathers upon the water of Lake Calhoun at the bathing-beach, a twenty-four-hour test was undertaken. The results of this test included meteorological data, a record of the number of bathers, and bacteriological examinations of the water. During this period, 4,192 persons were registered at the bathing-pavilion, and it was estimated that at least 800 other persons, who did not pass through the bathing-pavilion, used the bathing-beach, thus making a total of approximately 5,000 persons.

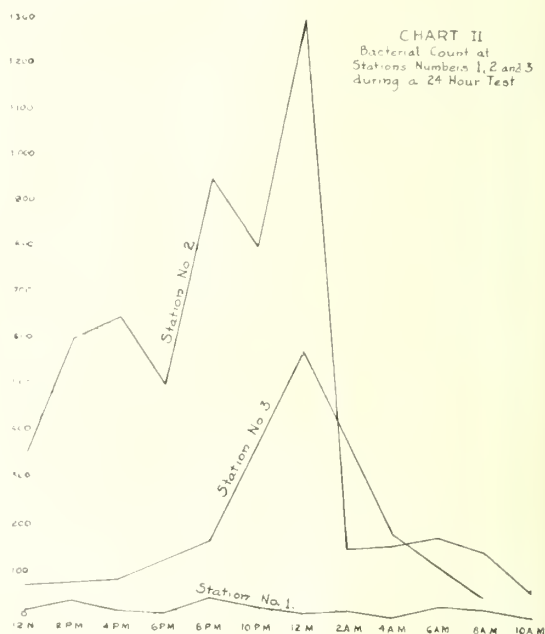
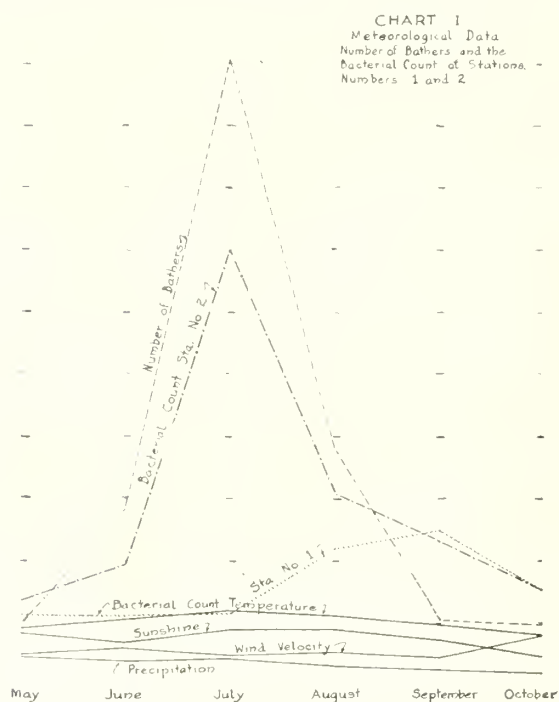
at Stations No. 6, No. 7, and No. 8. Station No. 1, at the center of the lake, shows quite a marked stability in bacterial count throughout the period. Station No. 2, located at the bathing-beach, shows a gradual increase in the number of bacteria during the bathing period and for two hours following, when a sudden drop is indicated. Stations No. 3, No. 4, and No. 5, located around the bathing-beach, show a gradual increase in bacteria as the number of bathers is increased at the beach. This would indicate a dissemination of the pollution throughout the adjacent areas. It, therefore, appears that the decrease in pollution at the bathing area is

brought about to a large extent by movements of the water caused by wind action. Station No. 3, which is located towards the main body of the lake, shows a lower bacterial count because of the better opportunity afforded for dilution. This station is located near the points where most of the diving is done in the bathing area; and the results show that it is the safest point in the area from a sanitary point of view.

Station No. 6, located on the west side of the lake, shows a consistently low bacterial count, while Stations No. 7 and No. 8, located on the south and east sides, show an increase at the end

tended to accommodate; but, on certain occasions during the bathing season, it is taxed far beyond its intended capacity.

The laundry plant, located at the Camden bathing-pavilion, at which the suits and towels from the Calhoun bathing-pavilion are washed, maintains established methods, which produce satisfactory results from a sanitary point of view. The capacity of this laundry is inadequate; and, during the rush season, the overflow work is done by private concerns. As a result of this practice, it is impossible for the Board of Park Commissioners properly to control the cleansing and disinfection of this material.



of the twelve-hour period. These increases are caused by bathing on the south and east shores of the lake. Chart 2 illustrates the bacterial counts at Stations No. 1, No. 2, and No. 3. These curves show clearly the effect of the bathers at Stations No. 2 and No. 3 during this test. The effect of the dilution at Station No. 3, which is located in deeper water at the outer edge of the bathing-beach, is again shown. The purifying effect which takes place during the resting period of the bathing-beach is well illustrated by the rapid fall in the number of bacteria which began about two hours after bathing ceased.

SUMMARY AND CONCLUSIONS

The Lake Calhoun bathing-pavilion is well equipped to care for the 6,000 bathers it is in-

The field survey of Lake Calhoun shows it to be an open body of water subject to pollution by surface drainage and by pleasure seekers. These conditions attend practically any body of surface water located in the vicinity of a populated area. The analytical results on water collected from various parts of the lake showed indications of contamination when judged by the standards set for drinking water.

The investigation on Lake Calhoun in relation to the Calhoun public baths brought out the following facts:

1. The water over this bathing-beach, when judged by the bacterial standards set for drinking water, was found to be polluted during the bathing periods, and this pollution increased with the number of bathers.

2. Practically all of this pollution was shown to be contributed by the bathers, thus indicating it to be largely of human origin.

3. Under normal conditions, these indications of pollution disappeared within a few hours after the cessation of bathing. This rapid improvement in the quality of the water was largely caused by the dilution and displacement which were brought about by wind action. Sunlight apparently plays a very small part in this rapid improvement of the water over the bathing area, for these changes were demonstrated as a night occurrence.

4. The size of Lake Calhoun is such that the amount of pollution contributed by the bathers during this investigation was not sufficient to grossly contaminate the entire lake, although some accumulative affect was shown by the analytical results.

5. Physical examinations of the water indicated it to be comparatively free from turbidity, color, and odor, which, if present in large quantities, would render it undesirable for bathing purposes. Microscopic examination showed the presence of a few microorganisms in the water at the bathing-beach, but not in sufficient numbers to be objectionable.

6. The preceding data indicate that there is an opportunity for bathers who swallow the water to become infected with an intestinal disease, although there were no cases traced to this source.

RECOMMENDATIONS

1. The sanitary quality of the water in the bathing area can be improved by (a) limiting the number of bathers; (b) by increasing the size of the bathing area by extending it along the beach; or (c) by treating the water in the bathing area with calcium hypochlorite or liquid chlorine.

2. Lake Calhoun and the bathing area should be kept under analytical supervision. Bacteriological examinations should be made on water from the bathing area and from various parts of Lake Calhoun at frequent intervals in order to detect excessive pollution from bathers or other sources. Microscopic examinations of the water should be made early in the season to detect the presence of microscopic organisms, such as algæ; and the copper sulphate treatment should be applied to the infected areas before large numbers of such organisms develop.

3. The laundry facilities of the public-bath system should be increased, so that all the material can be cleansed and disinfected under proper supervision.

4. The bathers should be warned against swallowing water taken into the mouth while bathing and against polluting the water with their body discharges.

1. Mr. A. C. Godward, Engineer, Board of Park Commissioners.

2. Mr. Carl Illstrup, Sewer Engineer, City Engineer's Dept., Minneapolis.

3. Public Health Reports, vol. 29, No. 20.

4. Calculations made according to method suggested in Standard Methods of the Laboratory Section, American Public Health Association, 1917.

THE LIVER AND PORTAL OR MULTILOBULAR CIRRHOSIS*

By H. L. STAPLES, A. M., M. D.

MINNEAPOLIS, MINNESOTA

This subject may be considered by some a dry one, yet nearly every paper has a modicum of value for all. In ancient times some physicians devoted their entire attention to diseases of the eyebrows, the umbilicus, the toe-nails, etc., which led Plato to remark: "This is the reason why the cure of many diseases is unknown to the physicians of Hellas, because they are ignorant of the whole, which ought to be studied also, for a part cannot be well unless the whole be well."

The liver is an organ secondary in importance to the heart only, yet is rarely mentioned among our medical topics, and by many its diseases are

not clearly comprehended. Galen considered the liver as the central organ of life. It acts as a tremendous bulwark in transforming and destroying toxic substances absorbed from the stomach and intestines. In the great majority of cases the portal vein is the pathway through which various poisons enter the liver. The aphorism of Stahl, "Vena porta, porta malorum," is very true.

Like unto Minos, in Dante, the liver tests the conscience of those who want to enter, and knows their sins. The hepatic cells may function perfectly and render harmless an irritant substance, or the cells may be overwhelmed and destroyed.

*Read before the Minnesota Academy of Medicine, Dec. 12, 1917.

In 1854 Francis Glisson wrote a remarkable work entitled "*Anatomia Hepatis*," representing thirty years' work on the structure of this organ. His name is perpetuated in the "capsule of Glisson."

Let us consider the nomenclature a moment: *liver* is of Teutonic descent,—German, *die leber*; Anglo-Saxon, *lifer*; Danish and Dutch, *lever*. The Greek, *hepar*, gives us hepatitis and cognate words. "Chola" means bile, as does also the Latin "bilis." Jaundice is from the French *jaune*, meaning yellow.

"Kirros" means orange or yellow, adopted by Laennec, in 1819.

"Morbus regius" arose from the fact that royalty was usually jaundiced from gall-stones, syphilis, or, more frequently, the combination.

"Icteros" was the Greek word for the golden thrush, a bird with yellow plumage. If the jaundiced person gazed at the bird he would recover, but the bird would die.

The ancient writers referred to the liver as the seat of the passions; and "melancholy" literally means black bile.

Thus Homer writes: "Apollo having his bile imbibtered, a dire contagion spread and filled the camp with mountains of the dead." Dryden says, "The yellow gall that in your bosom floats engenders all these melancholy thoughts."

Shakespeare is replete with allusions to this organ: "What grief hath set the jaundice on thy cheek, with liver burning hot. I had rather heat my liver with drinking. You measure the heat of our livers with the bitterness of your gall." "With a green and yellow melancholy she sat like Patience on a monument smiling at grief."

Burton in his *Anatomy of Melancholy* says that a hot liver is one of the causes of melancholy. "The liver is the shop of humors, and causeth melancholy by his hot distemperatures."

Hippocrates speaks of four humors: the blood, the phlegm, the yellow, and the black bile. When the liver is filled with water it bursts into the epiploon. Aristotle, in his history of animals, noted that the horse, ass, deer, and elephant have no gall-bladder. It is variable in birds, and absent in the mule.

Dickens, in *Pickwick*, has Sam Weller, Sr., remark: "I rather think my boy that he's got liver complaint." "Does he look bad?" inquired Sam. "He's uncommon pale except about his nose, which is redder than ever. His appetite is werry so so, but he imbibes wonderful. I mean this here, Sammy, that wat they drink don't seem no nourishment to 'em, it all turns to warm

water and comes pouring out of their eyes. Pend upon it, Sammy, it's a constitutional infirmity."

Cirrhosis was first described by Versalius, in 1550. Alcohol is of first importance in the pathogenesis of this malady. Next are the poisons passing through the intestinal tract, enterogenic toxins, so called. Boix has shown that the organic acids of digestion may produce cirrhosis. Stitch was astonished at the fact that there were so many poisons in the alimentary canal and so few toxic accidents.

Sharp spices, pepper, mustard, horse-radish, raw onions, radishes, vinegars, and ginger used to excess, have all been accused. In the normal state these poisons are resisted by the liver, but if it grows feeble the toxic action takes place, and hepatic cirrhosis by auto-infection of a gastrointestinal origin takes place. Lead, arsenic, silver, and naphthol have been stated as causative agents. Phosphorus in small medicinal doses of $\frac{1}{100}$ gr. has been shown by Opie to be exceedingly dangerous to the liver, so that it is possible that its indiscriminate administration to delicate children has done more harm than good. Rolliston states that the Fuegians eat ten pounds of mussels daily. At times a toxin develops in these bivalves causing a rapid cirrhosis. The Hindus and Mohammedans drink no liquors, but use enormous quantities of red pepper and other condiments. Among them cirrhosis is frequently found. Not all alcoholics develop cirrhosis. I have examined patients who have been embalmed in whiskey for twenty-five years who showed little or no cirrhosis, dying from some other malady.

What is a moderate allowance for one person may excite serious disease in another. One of the worst habits is drinking undiluted spirits on an empty stomach. Hale White writes: "I made a post-mortem on a friend who had all his life been so temperate that he was almost a teetotaler." He had a marked cirrhosis with ascites. It is found occasionally in children, those of pronounced alcoholic habits, and also where no such condition exists. Bix cites a case where in thirty years a patient was reckoned to have consumed 10,000 bottles of cognac, and 5,000 bottles of champagne and strong wines. Notwithstanding this quantity of alcohol only a possible beginning of cirrhosis was found on examining the liver.

One of the most important early symptoms is attacks of pain in the hepatic area, with tenderness over the liver. There is a slight obstruction to the flow of bile. Stasis favors bacterial infec-

tion. A cholangitis with slight jaundice occurs. There is the presence of weight, discomfort, pains radiating to the right shoulder. The liver may be enlarged and palpable. Fever is rare, constipation is usual, but an occasional diarrhea may ensue. The belly may be distended and tympanic,—an important symptom. "The wind precedes the rain," Dieulafoy remarks. Anorexia and nausea with attacks of vomiting are frequent.

Hemorrhages are symptoms of the precirrhotic period, especially bleeding hemorrhoids, which act as safety-valves; and I beg of you in operative enthusiasm do not remove them.

Hematemesis may be confused with gastric ulcer. Loss of flesh and general weakness may also precede the other symptoms. The skin becomes dry and earthy, the face and nose marked by dilated veins. A man asked the medical department of a daily paper, "What will change the red color on my nose." The answer was promptly returned, "Keep on drinking; it will soon become purple."

Jaundice is present in one-third of the cases due to duodenal inflammation or pressure on the bile-ducts. It is never so deep as in cancer. Neuritis may be an early symptom, especially in women. The cardiac sounds are weak, and the pulse-tension low. Fatty heart may occur. Tuberculosis is a complication in 15 per cent of cases. Ascites occurs in 50 per cent of cases dying of cirrhosis.

Diagnosis.—The liver may be enlarged through the entire course of the disease. Usually, after a time contraction occurs, the lower boundary disappears into the cupola of the diaphragm, and it may weigh less than two pounds. To determine positively that enlargement, when slight, exists is impossible. Inspiration and expiration change its position, fluids in the pleural or pericardial sac, tumors, relaxed ligaments, corsets, belts—all must be considered.

Palpation, percussion, which is of great importance with or without the aid of a stethoscope, flicking, and dipping are the usual methods employed. The stomach symptoms, hemorrhoids, and splenic enlargement assist. Hale White mentions a spleen weighing 87 ounces. The gray skin, slight icterus, hematemesis, loss of flesh, and an anemic condition, are important. The hobnails of the liver when palpable are never larger than a small cherry, which may help in distinguishing between cirrhosis, syphilis, and cancer.

Prognosis.—In the early cases the progress of

the disease may be stayed, or it may be symptomatically cured. Later on, a large percentage get better, and remain fairly well for years. One important matter is the condition of the kidney. Where a chronic nephritis exists the case is hopeless, even for improvement to any extent. Myocardial changes are also unfavorable. The pathology is essentially an extensive development of connective tissue with the corresponding destruction of hepatic cells. The prognosis depends upon the condition of these cells. Younger persons are more favorable to recovery, as the general nutrition is better preserved. These patients are repentant, but not obedient, and often relapse into their old alcoholic habits.

Hale White writes, "I have known a man in whom a hard cirrhotic liver was detected, give up alcohol, and live in excellent health many years." DeBoue of Paris writes: "If the cirrhosis of Laennec is a malady incurable, in the anatomical sense of the word, one, nevertheless, can hope that, put in the presence of a case of this kind, one is able by appropriate therapy to put a stop to its evolution, and render it latent. In this endeavor it is especially the disappearance of the ascites which it is necessary to obtain; for it is the necessity of its frequent evacuation more than any other cause which makes the sick one move rapidly towards the cachexia."

Treatment.—In the early stages of this malady a recovery may be expected in many cases, so far as symptoms are concerned. Alcohol in all forms must be absolutely prohibited. The diet should consist largely of milk, buttermilk, cooked vegetables, and cereals, avoiding fats, condiments, and fried foods. Sugar should be limited. Remember Semmola's dictum, "Reduce the food to a minimum and give that which will tax the liver cells the least." Carlsbad water and Carlsbad salts or saline laxatives are very useful with appropriate treatment for the stomach symptoms. A liquor-dealer should change his occupation to avoid the ever-present temptation. When the disease becomes more advanced with the presence of ascites, rest in bed, preferably in a hospital, is imperative. The patient must become a total abstainer. Here the milk diet of Karell is very useful. The objections to its employment can usually be overcome by a full statement of the gravity of the situation.

To relieve the constipation and produce copious liquid stools I have for years employed Cluttbuck's elaterium in doses of 0.1 gr. at bedtime. It rarely produces pain or nausea. Bowel

venesection where plethora and high blood-pressure exist.

The Karell cure was announced about 1866 as useful in cardiorenal and hepatic dropsies. Karell was for a time physician to the Russian emperor. In most cases drugs may be disregarded. In all instances diet has earned a well-deserved and fixed place, but rest in bed is essential. At 8 A. M., 12 M., and 8 P. M. give 200 c.c. of raw or boiled milk, cold or warm, as preferred, with no other food or liquids. The mouth may be rinsed out with water for thirst. Later, give dry toast or Zwieback with each portion of milk. Still later give eggs, Zwieback, white bread, and vegetables, keeping the fluids down to 800 c.c. daily. After ten days to two weeks, give a little meat and fish, maintaining a salt-poor diet. If uremic symptoms supervene, stop treatment. Laxatives are constantly required. This may be varied as occasion may demand.

Mr. M. was admitted to the City Hospital four years ago in a condition of general anasarca, the abdomen contained a large amount of fluid, and the face and limbs were enormously swollen. He had been on intimate terms with whiskey for twenty years. His wife was a Christian Science healer, and she had called in a battalion of healers to relieve him. He described it graphically as follows: "The more they yelled the worse I swelled." He was tapped three or four times in the course of three months. The liver was found contracted. A Karell diet was prescribed at first with claterium at bedtime. He left the hospital in four months, and resumed his occupation. He dropped dead of heart disease three years later, having had no return of hepatic symptoms.

The word ascites is derived from *askos*, a wine-skin, and so ascites is the wine-skin disease. At first the ascites was thought due to drinking too much water. Dr. Payne, of Edinburgh, in 1685, says the Scotch were very careful not to make that mistake.

The rest and diet will often cause the fluid to disappear. Tapping should not be long delayed. Where there is a large amount of fluid in the abdomen we often find albumin in the urine, which disappears on paracentesis. It may occur suddenly from an abdominal injury or exposure to cold, but it is usually gradual in onset. Hale White states that he has removed ten quarts at one time, and that he has seen it collect at the rate of one pint daily. Tapping should be done in the median line, not at the side, as a vein may be punctured, midway between the umbilicus and the

symphysis. The bladder should be emptied. Irritation, as mentioned by some authors, I have not observed. Calomel, in 3-grain doses three times daily for three days, produces a large amount of urine, and a marked reduction of the abdominal fluid, which continues reduced for a much longer time than after tapping. In a few well-selected cases I can speak with gratitude of have known two cases where a distended bladder was perforated.

Cocaine or novocain should be used, and the skin incised before using the trocar. The patient is placed in a sitting posture and a binder wound about the abdomen. It is important to evacuate the liquid slowly. Boix says that a patient was tapped 21 times and 190 liters of fluid removed, an average of 9 liters per tap. He demonstrated cirrhosis by necropsy. This was diagnosed as cancer by Hanot, who made repeated examinations.

Patterson reports a case where 25, 20 and 12 quarts were withdrawn at different times. This case at necropsy showed no perihepatitis or peritonitis. A blacksmith, in Dieulafoy's clinic, was tapped 18 times, and 360 pints removed. He regained his health and resumed his trade, but replaced wine with milk.

Murchison had a patient with cirrhosis accompanied by ascites. He became a total abstainer, lived twelve years, and died of granular kidneys and peritonitis.

Hematemesis is usually caused by a rupture of varicose veins, especially in the lower esophagus. It is frequently confounded with gastric ulcer. There are certain things to do, and not to do in this complication. Rest in bed and abstinence from food and drink are essential. Do not give the patient ice to suck. Rinse out the mouth with warm water. Do not give saline injections unless in extreme collapse. An injection of morphine is beneficial. Calcium chloride, 1-drachm doses twice a day by rectum, and adrenalin, $\frac{1}{1000}$ solution by the stomach, are recommended. The patient should be fed by the rectum for three days, then peptonized milk given by the mouth. If ascites is present, removal of the fluid will usually check the hemorrhage.

The various other hemorrhages require appropriate treatment. The Talmas operation for cirrhosis is no longer performed by conservative surgeons. The mortality was excessive, and the few recoveries could be attributed to the rest and diet instituted.

After a partial recovery of one of these pa-

tients a most careful regime should be instituted. Unless the power of will is infallible relapses occur.

What I want to impress by this paper is that portal cirrhosis is a preventable malady, but, if established, often the patient can be symptomatically cured or given years of a tolerable condition of health. It is impossible to restore the anatomical changes in the liver cells. Its early recognition and early institution of remedial measures are of vital importance. It is a Moloch which too frequently attacks the kindest, the most generous, and open-hearted among our friends and associates. Deprecate Omar's philosophy:

"Ah, fill the cup! what boots it to repeat,

"How time is slipping underneath our feet."

And preach the doctrine of Ecclesiasticus: "Show not thy valiantness in wine, be not unsatiable in any dainty thing, or too greedy upon meats. By surfeiting have many perished, but he that taketh heed prolongeth his life."

MISCELLANY

THE OFFICIAL ARMY DEATH-RATE 7.5 PER THOUSAND AGAINST 20.14 RATE IN 1898

The death-rate in our forces in the United States, from mid-September to the end of December, averaged 7.5 per thousand, and is slightly less than would have been the death-rate of men of the same age at home. In 1898 the death-rate per thousand was 20.14, or nearly three times as great. Our death-rate in the Army during the year 1916, just before the war, was 5 per thousand. Leaving out the deaths due to measles and its complications, our rate among all troops in the United States, since September 1, has been about 2 per thousand. These figures are properly comparable. The 5 per thousand for 1916 means for the whole year. The 2 per thousand for this year means that if the number of deaths since the 1st of September from all causes, exclusive of measles and its complications, should continue the same for the following eight months, our rate for the end of the year would be about 2 per thousand.

"WE NEED YOU AND YOU NEED US"

The strongest appeal that any body of men—a church, a medical society, an army—can make

to an outsider to join it is "We need you and you need us." This is the appeal made by the president of the North Dakota State Medical Association to every physician in the state not now a member. The following is a copy of Dr. Williamson's letter recently sent out:

You are reported as a non-member of your local medical society. I am very anxious that you send in your application. We need you and you need us.

Membership in your local society carries with it membership in the State Association without additional dues; gives you THE JOURNAL-LANCET, the official organ of the State Association, free; also gives you the benefit of the State Medical Defense; and, best of all, you will be one of the physicians who are trying to promote the welfare of the profession within the state.

I want every ethical physician in North Dakota to be a member of the State Association this year. If you have any reason for remaining on the outside write me; I want to know so that any wrong may be made right.

As a personal favor you will fill out the enclosed application today and send it to the secretary of your local society, Dr.

I want to see you at our annual meeting in Fargo next June.

Yours truly,

G. M. WILLIAMSON,
President.

VARIATIONS IN WEEKLY DEATH-RATES

A study of vital statistics will soon convince one that figures, if not facts, are often very misleading. Take for instance the weekly report of the Bureau of the Census in regard to the death-rate in a list of forty-five of our large cities. The variation allows the daily press of a city with a low death-rate this week to advertise how healthful its city is, and the same opportunity comes to another city next week. The press is greedy to use the opportunity, and ignores the real facts.

Is not the same process common in the medical profession, although not used to deceive anyone outside the profession?

A very recent weekly report showed the following facts (the figures following the name of the city in parentheses give the estimated population in round numbers, and the next number is the death-rate): Memphis (152,000), 26.4; Richmond (159,000), 23.3; Albany (107,000), 23; Syracuse (159,000), 18.8; Milwaukee (445,000), 9.4; Seattle (366,000), 6.7.

The average death-rate for this week in all the cities being 15.8, the variation from 6.7 for Seattle to 26.4 for Memphis is suggestive of the danger in quoting or depending upon isolated facts or figures from which to draw conclusions.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
H. J. ROWE, M. D. - - - Casselton, N. D.
H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

FEBRUARY 15, 1918

LOOSE SURGERY

Some months ago a celebrated surgeon wrote a very valuable article on unnecessary surgery, and he included in his paper many remarks which refer aptly to the loose methods of some surgeons. He admitted that there are many good, conscientious, reliable surgeons, and, furthermore, he stated that there are a number of men who are rather hasty in their judgments, and will operate on most anything that will lie still, whether an operation is really necessary or not.

This situation has been before the profession for a long time, and any comment upon the attitude of certain surgeons seems to make no difference in their surgical methods. Undoubtedly, there are many cases that look surgical, particularly to a surgeon, when not surgical; and these patients are often hurriedly, and without careful investigation, rushed into a hospital to be operated on, the case to be diagnosed after the operation. Such a course takes away the keenness and education of the surgical diagnostician. He should be the man that we may rely upon, first, to make a surgical diagnosis and then to decide whether operative interference is necessary or not.

We are obliged again to refer to the more careful investigation of the individual, not only from a surgical, but from a medical and a special, viewpoint; and, unless there is more co-operative and consultation work among the va-

rious representatives of the different departments of medicine, loose surgery is going to flourish. It is commonly understood that many a woman is operated on for pelvic troubles who has a minor pathology, and who perhaps never knew that she was carrying organs that were not thoroughly normal, at least not until the surgeon made his investigation and decided that some repair of the cervix or the perineum was necessary to cure her of a multiplicity of complaints. Not infrequently these women are built on a wrong nervous plan, and their nervous mechanism is so unstable that they magnify minor symptoms more than they should, and when their complaints are emphasized by the surgeon, who is too often impatient to operate, they become firmly convinced that their whole organism can be benefited by a surgical operation. This deluded state lasts for a period of time, and in the unstable, the time is usually very short, a few weeks or perhaps a few months, when all of the old nervous complaints return. They perhaps are seeking relief, and they reappear in the surgeon's office, only to be told that something else has gone wrong, that adhesions have unexpectedly developed, and that it will be necessary for them to undergo a second operation. This operation is done, and the end-results are practically the same. Not infrequently these unstable neurotics are operated on five, six, or even ten times, with the result that the same symptoms appear in due course after each operation.

Women who have grown old before their time are not infrequently subjected to needless and usually harmful operations, whereas an investigation of their arterial state, their devolutional state, would clear up the situation and eliminate the necessity for operative measures. Then, too, as has been said before, men sometimes are very busy, and make a rapid examination and follow it up with a rapid and not well thought-out conclusion, only to find, to their chagrin, it is hoped, that the patient has something entirely different the matter with him. These cases are not uncommon, as every surgeon will admit. Even the best surgeons assert that it is often very difficult to make a completely satisfactory diagnosis. Women are operated on for fibroids when they have ovarian tumors, and are sometimes operated on for ovarian tumors when they are pregnant. The diagnosis is made only after the operation.

This is not said to censure the surgeon, but to suggest that in these times of stress and anxiety more consideration be given the individual

under investigation and inspection, and that more historical data be gathered before a final conclusion is reached, and thus save many people from needless operations, which are frequently followed by needless and unnecessary symptoms.

Perhaps the recent methods of treating surgical wounds that occur on the battle-lines will further emphasize the need of more conservatism in surgical treatment and surgical technic. As we read the full records of surgeons attached to the hospitals near the front or at the front, we are impressed with the fact that many limbs are saved which in our Civil War would have been promptly amputated. Now the effort is made to conserve the life of the limb, even though somewhat deformed; and from the notes that we have before us it has been found that serious surgical wounds recover promptly, unexpectedly, because of the conservative method of cleanliness, irrigation, and the "let-alone" treatment. This same conservatism should apply to some individuals thousands of miles from the front, who endure, without much discomfort, pathological errors. The "let-alone" treatment is sometimes very good, as is proven by the various cults that are treating people who have been frightened by the surgeon. The mental status of the sufferer is modified, the introspection and fear of his condition is eliminated, and he recovers his mental and nervous equilibrium, destroyed by some enthusiast who suggested that an operation is his only means of defence.

Medical men and specialists see these conditions perhaps more often than does the surgeon. Although it is admitted that many surgeons who operate in good faith believe that the result of the operation will bring about an expected cure, they find, to their disappointment, the cure does not follow the operation. The honest surgeon, the conservative surgeon, fully understands why this occurs, and he wisely makes no promises beforehand, but simply gives his opinion based upon his judgment, and, if the patient assumes the responsibility, no blame is attached to the surgical operation. But the other man, though not after surgical work and operates because he sees only one side of the question—the surgical—will rarely admit that he has failed in his enterprise; but, if the book of secrets could be opened to the public and even to the medical profession, the records would show many failures, many needless operations, and many incapacitated individuals.

PUBLIC BATHING-BEACHES VERSUS PUBLIC HEALTH

The question is frequently asked, "Are public bathing-beaches a factor in the transmission of disease?" The Minnesota State Board of Health has just completed an investigation of the Lake Calhoun public bathing-beach in Minneapolis, which has brought out some important facts bearing on this question. The investigation was conducted by Mr. H. A. Whittaker, Director of the Division of Sanitation, and is reported in detail in this issue of *THE JOURNAL-LANCET*. It includes a study of the public bathing-pavilion, the bathing-beach, and Lake Calhoun, in relation to certain factors which might effect the health of the bathers. The field studies and the analytical results show that conditions at the bathing-beach, during the congested periods, are favorable for the transmission of communicable diseases, and especially those of intestinal origin, while the epidemiological investigation failed to trace any communicable diseases to this source. In view of the possibility of disease being transmitted, the State Board of Health made certain recommendations to improve existing conditions.

This investigation resulted in establishing certain fundamental facts regarding the sanitation of public baths in general, which information is included in another brief article to be published in our columns soon.

We desire to call attention to these important papers, for, to our knowledge, they are about the first articles to appear on this subject in any journal, and the information they convey bears upon a very important public-health problem, which is of vital interest to physicians, health officers, and sanitarians.

MINNEAPOLIS CLINIC WEEK

Our readers were asked in the last issue of *THE JOURNAL-LANCET* to watch each issue as it comes out for further information in regard to the week of clinics to be given in Minneapolis from April 8 to 12, inclusive. The organization is well under way, and various committees have been appointed to look after all phases of the clinic. The program committee has already begun its work; the publicity committee is busy; and the executive committee has been in session a number of times. Plans have been laid for circularizing the profession. Letters will be sent out all over the Northwest, informing the profession of the efforts to present a clinic that will

be worthy of their attention. The program will not be published for some time, because it must be, not only well balanced, but well ordered, and a schedule made so it will be possible for men to get about without too much overlapping. A committee on arrangements has already been instructed as to their duties, and will undertake, among other things, to arrange for the housing of the visitors, that is, the securing of hotel accommodations and things of that sort. The entertainment committee will have much to do, but the committee on arrangements will have most of the work because so many details will have to be carefully scheduled in order to make the week a success. The committee on entertainment will provide whatever social functions are deemed necessary, but it is presupposed that our visiting medical men will want to do some things themselves without being forced into too many semi-entertaining evenings.

Above all, the clinic is to be a scientific effort, and there seems to be no doubt, at the present writing, but what it can be carried out with full assurance that the work will be instructive from a medical and surgical point of view.

We ask our readers, too, to keep on file letters sent them on the subject so that they may refer to them at any time, and thus keep in touch with the situation. Men are not to be bombarded with too much of this sort of thing, but they will be given whatever notice is necessary so that they may determine whether they care to visit the clinic or not. It is expected that during the week the Hennepin County Medical Society will give its annual dinner, which will include as guests visiting men from outside the Twin Cities.

BOOK NOTICES

THE SURGICAL CLINICS OF CHICAGO, December, 1917.
Philadelphia: W. B. Saunders Company.

Clinical teaching is one of the most useful and practical of educational methods. These bi-monthly clinics are popular because the material in them is fitted, as a rule, for the busy man who would not look up the more voluminous historical side of the operation. They apparently contain no departure from the clinics of Doctors G. Kolischer and J. S. Eisenstaedt, of Chicago, who gave in the August Clinic of 1917 a new method of local anesthesia in prostatectomy, which had been reported in December, 1912, by Dr. Charles H. Mayo, who had witnessed this technic and operation at Heidelberg by Dr. Wilms in the summer of 1912. I am just reminding our Chicago friends that some medical men

have a good memory. On the whole the clinics are worth reading from cover to cover by our surgeons.

The more one reads surgical literature the more one misses the late Dr. John B. Murphy, who put the what to do in surgery, as well as how to do it and what not to do.

—LAURENT.

TALKS ON OBSTETRICS. By Rae Thornton La Vake, M.D., Instructor in Obstetrics and Gynecology, University of Minnesota. Cloth. Price, \$1. Pp. 157. St. Louis: C. V. Mosby Company, 1917.

This book is decidedly unique and very concise, being in reality a synopsis. It is intended to be a student book, but will prove to be very valuable for older physicians and country practitioners who are too busy to keep up with the current literature.

The author has made a special study of hematogenous infections, and, while he may be overenthusiastic on this subject, he is quite conservative in recommending it as an etiological factor in complications of pregnancy.

The book is so clearly and concisely written that I feel it would be of value to graduate nurses, as well as medical men.

—CONDIT.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared original articles on the treatment of medicine, surgery, neurology, etc. By leading members of the medical profession throughout the world. Edited by H. R. M. Landis, M.D. Volume 3, 27th Series, 1917. Price, \$2.00. Philadelphia: J. B. Lippincott Company.

In the clinical section Beifield presents and discusses a case of polycythemia with hypertension, so-called Geisbock's disease. Diagnosis is made by the blood-picture with evidence of a nephritis with an increased blood-pressure, and the lack of findings of polycythemia vera. Venesection to 400-600 c.c. is recommended as giving symptomatic relief. The prognosis is generally unfavorable.

Walsh illustrates the ever-present danger in the use of the term "neurasthenia," and speaks of the effect of the war-strain on the predisposed nervous system.

The use of diphtheria antitoxin intraperitoneally is new to the reviewer. Fonde describes a technic and reports a case, but the results would hardly seem to justify the means.

In a discussion of renal function, Dr. H. A. Christian in his clinic emphasizes the importance of the chemical blood-examination, and elaborates on the index of the excretion of urea.

A splendid article is that of E. Poirée on the association of cirrhosis and cancer of the liver. The differential diagnosis is discussed from the standpoint of the clinician.

Articles by Foster, Babcock, and Thomas add to the value of the surgical section. Armsby shows several interesting skin cases.

This volume should be of value to the general practitioner, and contains much of interest for specialists.

—PEPPARD.

NEWS ITEMS

Dr. F. G. Kohler has moved from Stewart to Hector.

Dr. V. G. Heselbine has moved from Kilkenny to St. Paul.

Dr. A. W. Drew has moved from Farmington to Swanville.

There are now 14,500 doctors in the Medical Reserve Corps.

Dr. W. J. Macley, of Minneapolis, started for France last week.

Dr. C. A. Scherer, of Fargo, N. D., has removed to Duluth.

Dr. Peter D. Whyte, who practiced until recently at Hardwick, died last month at the age of 44.

St. Luke's Hospital of Sioux Falls, S. D., graduated nine nurses from its training-school last month.

The public schools of Manhattan, Mont., were closed last month because of an epidemic of scarlet fever.

Dr. S. P. Meredith, who formerly practiced in Mankato, has moved to Vernon Center to resume practice.

The training-school of the Children's Home, in St. Anthony Park (St. Paul), graduated ten nurses last week.

The Health Board of Yellowstone County has engaged a county nurse for six months, paying her \$90 a month.

Dr. C. E. McCauley, of Aberdeen, S. D., is convalescing from an operation performed in St. Luke's Hospital.

Dr. Mabel Ulrich, of Minneapolis, has been appointed director of the Minnesota State Social Hygiene Commission.

The Mounds Park Sanitarium of St. Paul sent eleven of its staff of nurses to the Great Lakes Training Station last week.

St. Luke's Hospital, of Aberdeen, S. D., has employed an interne, and has installed a complete laboratory and x-ray equipment.

The name of the Parkview Hospital at Jamestown, N. D., has been changed to the Trinity Hospital, and it is now under the control of the Sisters of St. Joseph.

The opening of the Wadena-Todd County Tuberculosis Sanatorium has been delayed because of failure to receive machinery needed for the operation of the plant.

The Deaconess Hospital Association of Billings, Mont., will soon begin work on their hospital building, which will cost about \$60,000. C. C. Cohogan, of Billings, is the architect.

Dr. O. D. Pherrin, who practiced for a number of years at Stickney, S. D., has moved to White Lake, S. D., and become associated with Dr. J. C. Rogers, of the latter place.

Dr. Robt. Guilmette, who was reported dead last fall, has been visiting in Minneapolis for several weeks. He returned to London last week to re-enter the English medical service.

Dr. C. L. Brimi has resumed his practice in Cooperstown, N. D., having been honorably discharged from the M. R. C. because of physical disabilities. He had been stationed at Fort Dodge.

Dr. A. J. Paulson has moved from McVile, N. D., to Thief River Falls, where he formerly practiced, and has formed a partnership with Dr. D. F. Melby, under the firm name of Drs. Melby & Paulson.

Lients, F. A. Swezey, of Wakonda; H. G. Harris, of Wilmot; and J. F. Volby, of Viborg—all of South Dakota—have been honorably discharged from the Medical Reserve Corps on account of physical disabilities.

Dr. George P. Dempsey, house physician at the Mudcura Sanitarium, Shakopee, has been commissioned First Lieutenant, and given full charge of the new Aviation Department at the Dunwoody Institute, Minneapolis.

Governor Burnquist, of Minnesota, has appointed Mr. F. W. Cappelen a member of the Minnesota State Board of Health. Mr. Cappelen is the city engineer of Minneapolis, and his appointment gives the Board of Health two civil engineers.

Compulsory quarantining for smallpox has so signally failed in Wisconsin that Health Commissioner Furstman, of La Crosse, recommends its abolition, with notice to the public that people with the disease are abroad, and that vaccination is the only safeguard.

Dr. Arthur Laid, formerly of the Zopeming Sanatorium, writes Duluth friends that the work done by American surgeons among the tuberculous, army and civilian, in France, will be of great value in like work that will be required in this country after the war.

The Division of Venereal Diseases of the Minnesota State Board of Health has been granted \$35,670 to carry on its work. Dr. H. G. Irviae, the Director of the Division, will push the work

vigorously. The Division will have \$5,000 with which to purchase salvarsan for free distribution.

Capt. Ralph St. J. Perry has been placed in charge of the examinations of applicants for commissions in the Medical Reserve Corps from the Northwest. Those desiring to take the examinations for any of the medical branches of the service should apply to him at 416-417 Pillsbury Bldg., Minneapolis.

The controversy over the discharge of a student nurse in the Minneapolis City Hospital brought out some complimentary indorsements of the Hospital from distinguished men in hospital work, and gave some citizens their first knowledge of the high standing of the Hospital outside of Minnesota.

Dr. Charles Newell Burton, of Blue Earth, died of apoplexy on February 1, at the age of 51. Dr. Burton graduated from the University of Michigan in 1889, and had practised twenty-eight years—two years in Vermont, three years in Minneapolis, seventeen years in Elmore, and six years in Blue Earth.

Dr. J. W. Andrews, of Mankato, has declined to stand again for election for the State Senate, because of the need of his services in the Mankato Clinic, which has given seven or eight of its staff to the service of the Government. Unless a worthy successor takes his place, the medical interests of the public will suffer.

The Navy Department requests us to say that the Department is in urgent need of binoculars, spy-glasses, and telescopes. Men who have such glasses are requested to loan them to the Department for the use of the Navy. All glasses loaned will be returned after the war with the thanks of the Nation to the donors.

There were 78 cases of poliomyelitis, with 10 deaths, in Minnesota in 1917. There were 4 cases, with 2 deaths, in Minneapolis; 8 cases, with 1 death, in St. Paul; and only 1 case, with no death, in Duluth. The 76 cases occurred in 33 counties of the state, and in 48 sanitary districts, thus having a wide distribution.

The poliomyelitis clinics conducted last month in the Twin Cities and Duluth by the State Board of Health were eminently successful. In the Minneapolis clinic 138 patients, of whom 50 were new ones, were seen. In the St. Paul clinic 144 patients, of whom 77 were new ones, were seen.

The University of North Dakota has a new president, who brings to his work executive and scientific attainments of a high order and an exceedingly pleasing personality, Dr. Thomas

F. Kane, a Johns Hopkins doctor of philosophy. The medical department of the University will no doubt have the hearty support of the new president.

Mandan, N. D., has two new firms of physicians. The firm of Drs. Nickerson, Altnow & Aylen includes a new man in the city, Dr. Aylen, who was formerly located in Litchfield, Minn. The firm of Drs. Spillman, Kranz & Hickman also has a new man, Dr. Hickman, we believe, being a recent new-comer in Mandan. Dr. Nickerson is now at Fort Riley, Kansas, in the Medical Corps.

The Sioux Valley Medical Association met in Sioux City, Iowa, last month. The attendance was good, and the meeting was an excellent one. Drs. G. G. Cottam, of Sioux Falls, S. D., and Dr. H. J. G. Koobs, of Scotland, S. D., read papers. All the other papers on the program were read by Chicago or Iowa men. The next meeting of the Association will be held in Sioux Falls, S. D., in July.

The annual report of the Western Minnesota Hospital of Graceville is beautifully illustrated and handsomely printed. Nearly 500 patients were admitted last year, including 29 obstetrical cases. With 435 operations in the hospital there were only 4 deaths following operations. The training-school gives a two-year course, followed by one year of affiliation work in the St. Paul City and County Hospital.

The Hennepin County Medical Society has organized a Clinical Section, of which Dr. A. W. Abbott is chairman, Dr. W. A. Jones, vice-chairman, and Dr. E. J. Huenekens, secretary. All branches of medicine will be represented in this section. As soon as Chairman Abbott appoints the executive committee, such committee will take steps to organize a week's general clinic to be conducted early in April and to which all physicians will be invited.

The Goodhue County Medical Society held its annual meeting last week at Red Wing. The morning session was given over to a clinic in St. John's Hospital; and at the afternoon session papers were read by Dr. G. B. Eusterman, Rochester; Dr. L. E. Daugherty, St. Paul; Dr. A. G. Beyer, Red Wing; and Dr. M. W. Smith, Red Wing. Officers were elected as follows: President, Dr. A. E. Johnson, Red Wing; vice-president, Dr. A. T. Conley, Cannon Falls; secretary-treasurer, Dr. A. G. Beyer, Red Wing.

Dr. G. W. Williams, of Grand Forks, N. D., president of the State Medical Association, and

Dr. H. E. French, Dean of the School of Medicine of the University of North Dakota, attended the Annual Congress of Medical Education and Licensure in Chicago last week. Dean French read a paper before the Medical College branch of the Congress on "The Entrance Conditions After January 1, 1918"; and Dr. Wililams was chosen a member of the executive committee of the Federation of State Medical Boards.

The annual meeting of the Aberdeen District Medical Society of South Dakota, held in Aberdeen last month, was one of the best attended and most interesting and helpful meetings in the history of the Society. Clinics, papers, and a war talk by a Canadian physician made up the program. Officers were elected as follows: President, Dr. F. M. Baldwin, Redfield; vice-president, Dr. F. W. Freyberg, Aberdeen; secretary, Dr. T. J. Devereaux, Aberdeen; treasurer, Dr. J. E. Bruner, Frederick; delegate, Dr. J. F. D. Cook, Langford; censor, Dr. A. A. Sorenson, Aberdeen.

The Sioux Valley Eye and Ear Academy, composed of specialists in eye and ear work from South Dakota, Iowa, and Nebraska, met in Sioux City, Iowa, on Jan. 21. Papers were read by men from each state, followed by full discussion. A fellowship pledge of loyalty to the best interests of the profession, to each other, and in the interests of the public was adopted. The following officers were elected: President, Dr. R. D. Alway, Aberdeen, S. D.; vice-president, Dr. H. B. Lemere, Omaha, Neb.; secretary-treasurer, Dr. L. N. Grosvenor, Huron, S. D. The next meeting will be held July 25 at Omaha, Neb.

The Upper Mississippi Medical Society held its annual meeting last month at Brainerd. The program consisted of papers, with discussion, on obstetrics; and papers were presented by Dr. L. A. Davis, Wadena; Dr. F. H. Knickerbocker, Staples; Dr. W. A. Coventry, Duluth; Dr. L. M. Roberts, Little Falls; and Dr. J. A. Thabes, Brainerd. Dr. A. W. Ide, of Brainerd, gave a clinic at the Northern Pacific Hospital. Officers were elected as follows: President, Dr. J. B. Holst, Little Falls; vice-president, Dr. A. M. Watson, Royalton; secretary-treasurer, Dr. J. A. Evert, Brainerd; delegates, Drs. Knickerbocker and Thabes.

There have been two cases of poliomyelitis and five cases of cerebrospinal meningitis in Minnesota since January 1. One case of the former disease was in Olmsted County, and one in Renville County, the latter being fatal. Of the latter

disease, three cases, with one death, were in Minneapolis; one in Carlton County; and one in Cottonwood County, the last-named case being fatal. Smallpox, German measles, and scarlet fever are now prevalent in the state. German measles is negligible except when mild cases of scarlet fever are diagnosed as measles, and, therefore, are not quarantined. The death-rate from scarlet fever in the state is low, being only from two to three per cent.

The first of the "physicians' days" or "get-together clinic" at the Medical School of the University of Minnesota occurred last week, and was a gratifying success. Between sixty and one hundred visitors, mostly from outside of the Twin Cities, were in attendance, and the program for the two days was followed closely. The work done was, in the main, in the form of clinics and demonstrations; and the facilities of the school permitted each physician to see every step taken in a clinic or demonstration, thus rendering the work of real value to every man in attendance. These meetings will be held three or four times a year, and will grow in interest and value as experience suggests new lines of work.

RECENT ASSIGNMENTS OF NORTHWESTERN MEDICAL OFFICERS

Minnesota—

To Fort Riley, Kansas: Lt. P. L. Berge, Brainerd; Lt. H. E. Binet, Coleraine; Lt. H. A. Burns, Hutchinson; Lt. J. H. Cosgrove, Duluth; Lt. N. F. Doleman, Tintah; Lt. G. W. Dewey, Fairmont; Lt. R. C. Lowe, Fairmont; Lt. T. F. McCormick, Minneapolis; Lt. J. C. Michael, St. Paul; Lt. J. Moses, Adams; Lt. C. D. Richmond, Jeffers; Capt. G. M. Sewall, Deerwood; Lt. M. W. Wheeler, Glencoe.

To Camp Oglethorpe, Ga.: Capt. W. M. Chowning, Minneapolis; Lt. L. M. Hanson, Faribault.

To Camp Doniphan, Okla.: Lt. B. V. Bates, Wheaton; Major P. B. Cook, St. Paul; Lt. V. H. Moates, Minneapolis; Capt. R. M. Wald, Hastings.

To Fort Omaha, Neb.: Lt. Karl Dedolph, St. Paul; Lt. R. L. Leavenworth, Glencoe.

To Washington, D. C.: Major C. H. Mayo, Rochester; Lt. H. W. Snyder, Rochester; Lt. P. A. Ward, Minneapolis; Major L. B. Wilson, Rochester.

To Camp Beauregard, La.: Lt. E. G. Enberg, St. Paul.

To Camp Sheridan, Ala.: Lt. W. E. Cremler, Minneapolis.

To Minneapolis: Lt. G. D. Dempsey, Shakopee.

To New York City: Lt. F. L. Jennings, Hopkins.

To Chicago: Capt. J. A. McLaughlin, Minneapolis.

To Boston: Lt. C. K. Holmes, St. Paul.

North Dakota—

To Fort Riley, Kan.: Capt. G. A. Carpenter, Fargo; Lt. W. L. Cowper, Michigan; Lt. Ralph Deming, Mer-

cer: Lt. I. L. De Puy, Jamestown; Lt. J. A. D. Engesather, Brockett; Lt. A. J. Heimark, Finley; Lt. A. C. McDonald, Fingal; Lt. G. Monteith, Hazelton; Lt. W. F. Maertz, Lidgerwood; Lt. J. R. Pence, Minot; Lt. F. T. Rucker, Mott; Lt. C. C. Smith, Stanton; Lt. J. A. Smith, Moon; Lt. C. R. Tompkins, Oberon.

South Dakota—

To Fort Riley, Kan.: Lt. J. C. Carney, Parkston; Lt. J. H. Crawford, Castlewood; Lt. J. D. Edgar, Henry; Lt. L. A. Haug, Canton; Lt. L. R. Herman, Conde; Lt. H. D. Newby, Parker; Lt. D. O. Wheelock, Kampeska.

Montana—

To Fort Riley, Kan.: Lt. A. A. Husser, Hingham; Capt. G. B. Owen, Folsom; Lt. E. S. Porter, Moore; Lt. H. Schwartz, Butte.

To Chicago: Lt. A. M. Macauley, Great Falls.

To Washington, D. C.: Lt. C. O. Rinder, Deer Lodge.

PHYSICIAN WANTED

A good physician is wanted for an unusually good location. Address C. N. Rostad, Westby, Mont.

PART OF OFFICE FOR RENT

Wanted, a physician to share the offices of a dentist in the Donaldson Building, Minneapolis. Rent reasonable. Telephone Nicollet 1160 for full information.

POSITION WANTED

An experienced nurse wants a position as an assistant superintendent of a small hospital or as a surgical nurse. Good references given. Address 109, care of this office.

A McCASKEY PHYSICIAN'S SYSTEM FOR SALE

A one-hundred-dollar McCaskey's physician's system is offered for sale for \$70.00 cash. It is brand new, never having been used. Address 111, care of this office.

LOCUM TENENS WANTED

By February 1, for two or three months, in a general and surgical practice, with a six-bed hospital, in an excellent town of 900 in northern Minnesota. Privilege of buying. References required. Scandinavian preferred. Address 108, care of this office.

A SPLENDID OPENING

There is an excellent opening in a fine village near the Twin Cities for a high-grade physician who can do some surgical work. A man under forty is preferred. A splendidly equipped office is ready for him. There is nothing to sell; simply the right man is wanted. Address 107, care of this office.

MEDICAL BOOKS FOR SALE

New and used medical books for sale. Bargains. Write for our list. The Isca Co., Booksellers, Minneapolis, Minn.

ASSISTANT WANTED

Assistant physician for general practice, Mesaba Iron Range, Minnesota; \$150 per month for the first two months, then \$175 and up, to right man for full-time services. Send full information, photograph, and references in first letter. Will be thoroughly investigated. This is a good position for a live-wire. Address 114, care of this office.

PRACTICE FOR SALE

An unopposed practice of \$4,500 in modern town of 600. High school, electric lights, sewerage, etc. Best farming section in Southern Minnesota. Good roads. Will sell modern residence with office, or practice only for nominal sum. Good opening, especially for one able to speak German. Address 112,

PARTNERSHIP OR ASSISTANTSHIP WANTED

A partnership or assistantship with a future is wanted in the Twin Cities by a man thirty-five years old, with four years' hospital and six years' successful general practice; Protestant, a good mixer, and a hard worker. Will consider an ethical proposition only; available immediately. State full particulars. Address 110, care of this office.

OFFICE FOR RENT

Over ten per cent of the physicians of Minneapolis have been called to war. This has left many vacant offices, many of them in central locations, making an opportunity for physicians and dentists in outside locations to come to the center. The Pillsbury building, Sixth and Nicollet, is in the heart of Minneapolis, and offers some excellent space in single, double, or en suite.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-first annual session, opened Sept. 24, 1917, and closes June 8, 1918. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters this session. For further information address Charles Chassaignac, M. D., Dean, New Orleans Polyclinic, post office drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

DEATHS REPORTED TO THE STATE BOARD OF HEALTH OF
MINNESOTA FOR THE MONTH OF NOVEMBER 1917

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Ada	1,253	1,432	0															
Albert Lea	4,500	6,192	3	1														
Alexandria	2,681	3,001	2															
Anoka	3,769	3,972	2															
Austin	5,474	6,960	7															
Barnesville	1,326	1,352	1															
Bemidji	2,183	5,099	3															
Benson	1,525	1,677	2		1													
Blue Earth	2,900	2,319	1															
Brainerd	7,524	8,526	9			1	1								1			
Breckenridge	1,282	1,840	1															
Canby	1,100	1,528	4													2		
Cannon Falls	1,239	1,385	1															
Chaska	2,165	2,050	1															
Chatfield	1,426	1,226	0															
Cloquet	3,074	7,031	1															
Crookston	5,359	7,559	6	1													2	1
Dawson	962	1,318	3														2	1
Detroit	2,060	2,807	1															
Duluth	52,968	78,466	79	4		5	1	1						1	2	5		9
East Grand Forks	2,077	2,533	2															
Ely	3,572	3,572	2															
Eveleth	2,752	7,036	7			1		1										3
Fairmont	3,440	2,958	2															
Faribault	7,868	9,001	3														1	
Fergus Falls	6,072	6,887	6														3	
Glencoe	1,788	1,788	1														1	
Glenwood	1,116	2,161	2											1				
Granite Falls	1,454	1,454	2															
Hastings	3,811	3,983	7	2	1												1	1
Hutchinson	2,495	2,368	2														1	1
International Falls		1,487	0															
Jordan	1,270	1,151	0															
Lake City	3,142	3,142	3														1	
Le Sueur	1,937	1,755	3														2	
Little Falls	5,774	6,078	4	1													1	1
Luverne	2,223	2,540	2		1													
Madison	1,336	1,811	5														1	
Mankato	10,559	10,365	19	1		3											1	2
Marshall	2,088	2,152	3														1	
Melrose	2,591	2,591	2	2														
Minneapolis	202,718	301,408	357	41	4	40	2											
Montevideo	2,146	3,056	5	1											3	39	1	22
Montgomery	979	1,267	1														1	
Moorhead	3,730	4,840	1															
Morris	1,934	1,685	2															
New Prague	1,228	1,654	1															
New Ulm	5,403	5,648	8	1	1													
Northfield	3,210	3,215	6														2	
Ortonville	1,247	1,774	1															
Owatonna	5,561	5,658	3															
Pipestone	2,536	2,475	3															
Red Lake Falls	1,666	1,366	0															
Red Wing	7,525	9,048	8			1												
Redwood Falls	1,661	1,666	4															
Renville	1,075	1,182	1			1												
Rochester	6,843	7,844	37	1	1												9	3
Rushford	1,100	1,011	1															
St. Charles	1,304	1,159	0															
St. Cloud	8,663	10,600	11	1	1													
St. James	2,102	2,102	5			1												
St. Paul	163,632	214,744	235	25	5	13	5	1						2				14
St. Peter	4,302	4,176	0												6			
Sauk Centre	2,154	2,154	0															
Shakopee	2,046	2,302	3														1	
Sleepy Eye	2,046	2,247	4															
South St. Paul	2,322	4,510	5			1	1											
Staples	1,504	2,558	2															
Stillwater	12,318	10,198	9															
Thief River Falls	1,819	3,174	4			1												
Tower	1,111	1,111	0															
Tracy	1,911	1,826	2	1														
Two Harbors	3,278	4,990	3	1	1													
Virginia	2,962	10,473	21	1		3	1	2										
Wabasha	2,622	2,622	8	3														
Warren	1,276	1,613	2															
Waseca	3,103	3,054	4	1														
Waterville	1,260	1,273	1															
West St. Paul	1,830	2,660	1															
Willmar	3,409	4,135	4															
Winona	19,714	18,583	25	3	3	1												
Winthrop	813	1,043	0															
Worthington	2,386	2,385	1															

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Poliomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	1															1
Aitkin	1,719	1,633	1															1
Akeley			0															
Appleton	1,184	1,221	0															
Belle Plaine	1,121	1,204	3															
Biwabik		1,896	0															
Bovey		1,377	0															
Browns Valley	721	1,058	2	1		1												
Buffalo	1,040	1,227	1															
Caledonia	1,175	1,372	0															
Cass Lake	516	1,011	1															
Chisholm		1,684	5			1												1
Coleraine		1,613	3															1
Delano	967	1,031	1															
Farmington	733	1,024	1															
Fosston	864	1,055	2														1	
Frazee	1,000	1,645	2															
Grand Rapids	1,428	2,239	2															
Hibbing	2,481	8,832	13			1						1						2
Jackson	1,756	1,907	1															
Janesville	1,254	1,173	2															
Kenyon	1,202	1,237	6															
Lake Crystal	1,215	1,038	2			1											1	
Litchfield	2,280	2,333	2															
Long Prairie	1,385	1,250	2														2	
Madelia	1,272	1,273	0															
Milaca	1,204	1,102	0															
Mountain Lake	959	1,081	1															
Nashwauk		2,080	0															
North Mankato	939	1,279	2															1
North St. Paul	1,110	1,401	0															
Osakis	917	1,013	2															
Park Rapids	1,313	1,850	1															
Pelican Rapids	1,033	1,019	2														2	
Perham	1,182	1,376	2															
Pine City	993	1,258	1															
Plainview	1,038	1,175	1															
Preston	1,278	1,193	0															
Princeton	1,319	1,555	1														1	
St. Louis Park	1,325	1,743	2	1														1
Sandstone	1,189	1,818	0															
Sauk Rapids	1,391	1,745	1															
South Stillwater	1,422	1,343	0															
Springfield	1,511	1,482	0															
Spring Valley	1,170	1,817	0															
Wadena	1,520	1,820	3															
Wells	2,017	1,755	2															
West Minneapolis	2,250	3,022	1															
Wheaton	1,132	1,300	0															
White Bear Lake	1,288	1,505	1	2														
Windom	1,544	1,749	2															
Winnebago City	1,816	2,555	2															1
Zumbrota	1,119	1,138	1															
STATE INSTITUTIONS																		
Anoka, Asylum			3															
Faribault, School for Blind			0															
Faribault, School for Deaf			0															
Faribault, School for Feeble Minded			8						1					1				1
Fergus Falls, Hospital for Insane			8	2														
Hastings, Asylum			1															
Minneapolis, Soldiers' Home			5															
Owatonna, School for Dependents			0															
Red Wing, State Training School			0															
Rochester, Hospital for Insane			20	1	1													
Sauk Centre, Home School for Girls			0															
St. Peter, Hospital for Insane			5	1		1												
St. Cloud, State Reformatory			0															
Stillwater, State Prison			0															
OTHER PARTS OF STATE			654	53	5	37	7	2			8	1	2	1	11	59		43
Total for state			1791	149	25	118	18	7	1		15	2	5	6	29	179	2	121

*No report received. REGISTRAR not doing his duty
125 stillbirths not included in above totals.

Quaker Oats

Extra-Grade Oat Flakes

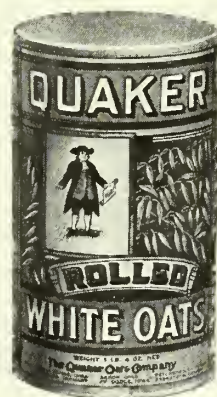
2260 Calories For 12 Cents

Quaker Oats is today a marvel of economy. Eggs cost nine times as much per unit of nutrition. The average mixed diet costs four or five times as much.

Yet Quaker Oats is the highest grade of oat food. It is flaked from queen oats only — just the rich, plump oats. We get but ten pounds from a bushel.

Because of this selection, Quaker Oats stands supreme in flavor. Because of that flavor, it stands first the world over.

Even at twice this price, a better oat food is impossible.



The Quaker Oats Company

Chicago

(1757)

Minneapolis Clinical Laboratory

Oldest in the Northwest

N. W. Nic. 3690 410 Syndicate Bldg. T. S. 33 117

We make Auto vaccines from discharges
or the blood

Wassermann Test - - - \$5.00

Serum Test for Gonorrhea, \$5.00

Serum Test for Tuberculosis, \$5.00

HENRY L. ULRICH, M.D., Director

Private Maternity Home

For Women before and during
Confinement.

Infants cared for. Physicians and Nurses in
attendance.

Good References Given.

MRS. J. W. MOREY

2014 26th Ave. So.,

MINNEAPOLIS, MINN.

Use Vaccines in Acute Infections

The early administration of Sherman's Bacterial Vaccines will reduce the average course of acute infections like Pneumonia, Broncho-pneumonia, Sepsis, Erysipelas, Mastoiditis, Rheumatic Fever, Colds, Bronchitis, etc., to less than one-third the usual course of such infectious diseases, with a proportionate reduction of the mortality rate.

Sherman's Bacterial Vaccines are prepared in our specially constructed Laboratories, devoted exclusively to the manufacture of these preparations and are marketed in standardized suspensions.

Write for Literature.



G.H. SHERMAN, M.D.
Detroit, Mich.
U.S.A.

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY
AND PROMPTNESS ARE OUR
CHIEF AIMS. Send to our nearest
laboratory for fee list and containers
with instructions for collecting all
specimens. These containers will be
sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses
of tissues removed at operation should be part
of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and
aerobically and isolate the offending organ-
isms. Pipettes for collecting material for auto-
genous vaccines sent upon request.

Wassermann Test, Blood or
Spinal Fluid \$5.00

We do the classical test. Any of the various
modifications will be made upon request without
additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories
(Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

PUBLISHER'S DEPARTMENT

A SPLENDID OFFER

Messrs. Noyes Bros. & Cutler offer a fine group of enamel operating furniture at a reduced price, as our readers will learn by turning to their full-page announcement on another page, where the items of the group are enumerated and illustrated. Each piece is of high grade, and the price of each is the actual selling price.

INTERRUPTERLESS APPARATUS

The increasing use and consequent large demand for an interrupterless apparatus capable of doing a clearly specified work, and thus meeting the needs of physicians, resulted in the production of the Meyer No. 2 Interrupterless, manufactured by the Wm. Meyer Company of Chicago, who are represented in the Northwest by the Standard Medical Supply Co., of Minneapolis.

The claims for this apparatus are the following:

It has a 7-inch parallel spark-gap, and is more powerful than any other machine of the same spark-gap.

It does radiographic work in accordance with the Brady Exposure Table.

It does all the radiographic work of some much higher-priced apparatus, and work of which some apparatus costing as much will do but a small part.

The price for the alternating current apparatus is but \$560.

The Wm. Meyer Company, of Chicago, or their northwestern representative, will be glad to demonstrate the machine or to furnish full information by letter concerning it.

HORLICK'S MALTED MILK

Horlick's malted milk, as a beverage and as a food, is a household word in American homes. For the invalid, the nursing mother, and for the baby deprived of mother's milk or one attempting to feed upon a low quality of mother's milk, this food is commonly recommended by both specialists and family physicians. It is delicious in flavor and possesses high food value, and rarely distresses the stomach ready for food of any kind.

AUTOGENOUS VACCINE

The results obtained from an autogenous vaccine have been, at times, so remarkable as to lead careful investigators to hope, if not to believe, that uniformly good results will follow when laboratory workers succeed in eliminating all possible errors in making these vaccines. The Beebe Laboratories of St. Paul assert that results of such a vaccine depend largely upon the method of its preparation. The essential steps are the complete isolation of organisms, perfect standardization, complete devitalization at the proper temperature, and production of absolute sterility. These laboratories feel

that they can guarantee such preparation, and consequently that good results will almost always follow the use of an autogenous vaccine in any case suitable to this form of treatment. The use of a vaccine can at least be rendered absolutely harmless when properly prepared. The Beebe Laboratories, of St. Paul, will be glad to correspond with physicians who seek further information along this line.

MUDCURA SANITARIUM

Mudcure is ideally located in the Minnesota valley, half way between the cities of Shakopee and Chaska, only nineteen miles from Minneapolis. It is a real homelike and comfortable winter and summer health resort, in an absolutely modern, steam-heated, electric-lighted, fire-proof building,—the essential parts for an up-to-date, well-equipped "Bath-House" with first-class hotel accommodations.

The grounds surrounding the Sanitarium are very picturesque, with rustic bridges, and a lagoon stocked with fish, and large enough for boating. Running water and graveled walks furnish a charming recreation-ground for the patients.

Mudcure has the advantage of supplying its table with products fresh from its own farm of several hundred acres. The dairy herd of pure-bred Holstein cows insures a constant and sufficient supply of milk and cream; the poultry flock supplies all of the broilers and eggs; fresh pork, beef and veal are raised on the premises; the gardens supply all fresh vegetables, and the spring-water brooks furnish an abundance of fresh water-cress the year round. In fact the Sanitarium is entirely independent of the markets for all vegetables and farm products used.

One pleasant feature about the institution is the cheerful and hopeful atmosphere. The help is kind and courteous; and there is no friction anywhere.

Anyone wishing to go there should make arrangements beforehand, either by phone or letter, to insure accommodations. Address Mudcure Sanitarium, Shakopee, Minn.

COLLECTIONS and CREDITS

THE MERCHANTS COLLECTION AGENCY

Incorporated

JOHN H. WOOD, Secretary & Manager

1015-1019 New York Life Bldg., MINNEAPOLIS

offers you a reliable, aggressive, efficient collection service. Advances costs for legal action. Remits promptly. Gives special attention to professional accounts, and merits your patronage.



BETHESDA HOSPITAL

Corner Ninth and Wacouta Streets

ST. PAUL

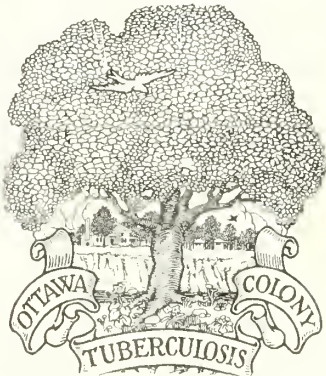
A First-Class Hospital, Centrally Located.

Efficient Corps of Physicians.

Best of Nursing.

Rates Moderate.

REV. J. A. KRANTZ, D.D., Superintendent



For Your Tuberculous Patients

TO whom you recommend the *service* and *comforts* of a private institution, THE OTTAWA TUBERCULOSIS COLONY affords exceptional facilities. Beautifully located in the cool "State Park" region, high above the Illinois River and overlooking the valley. *Private* cottages and *private* suites of open-air rooms with bath are available. Excellent cuisine with careful dietetic management. Resident medical staff and splendid laboratory service. Our booklet "What the Tuberculous Patient Should Know" will be sent upon request. You will find it of material aid in advising and directing your tuberculous patients. Rates \$25.00 to \$35.00 per week.

For illustrated booklet and complete information, address H. V. Pettit, Superintendent.

THE OTTAWA TUBERCULOSIS COLONY

OTTAWA, ILLINOIS



914 ELLIOTT AVENUE

ASBURY HOSPITAL

MINNEAPOLIS, MINN.

"Not to be ministered unto, but to minister."

A general, thoroughly equipped, *absolutely fireproof* hospital, founded Sept. 1892, and incorporated in April, 1893. Located in a medical center, opposite Elliott Park, occupying one-half block, it has no street cars or noisy pavements to mar the quiet of the neighborhood.

SPECIAL ATTENTION

is called to the five, fine operating rooms on the fifth floor; to the Maternity Department, complete in every respect, and occupying the entire fourth floor; to the Children's Department occupying the south half of the fifth floor, where fifty children can be cared for at the same time; to the X-Ray Department, which has one of the finest equipments to be found in the country, with an Expert Roentgenologist and assistant constantly in attendance; to the Pathological Laboratory under the direction of an expert, who will give prompt and accurate service to this department in or out of the hospital. The watchwords of this institution are **UNSELFISH—IMPARTIAL—IMPERSONAL.**

All questions for general information addressed to Asbury Hospital.

All personal questions addressed to Mrs. S. H. Knight, Supt.
Chicago Avenue Street car every five minutes within half block of the hospital.

THE JOURNAL-~~L~~ANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, MARCH 1, 1918

No. 5

THE EARLY HISTORY OF MEDICINE IN MINNEAPOLIS*

By ARTHUR S. HAMILTON, M. D.

MINNEAPOLIS, MINNESOTA

IN THREE PARTS—PART I

Members of the Hennepin County Medical Society: It is my pleasure, as well as my duty, this evening, to express to you, first of all, my high appreciation of the great honor done me in my election to the presidency of this Society, and, secondly, to acknowledge the generous and loyal support which I have had at all times from the officers and members of the Society.

At the time I entered on the duties of this office the black cloud of war, though hanging heavily over much of the civilized world, had not yet engulfed us. Today we find ourselves a contending party in the greatest war the world has ever known, and already thirty-two of our members have offered themselves and have been accepted in the service of the Army or the Navy. Under such circumstances, if I were choosing a subject for my address especially appropriate to the day, it would probably deal with some feature of the present war, but it happens that for several years I have been gathering material relating to the early history of the Society, and directly after my election I began the preparation of the paper which I shall present to you this evening, dealing with the early history of medicine in our community and with certain administrative details to which I wish first to refer.

Since the year 1907, thanks to the generosity of the L. S. Donaldson Company, we have had

quarters free of charge in this building, but the growth of the Society has demanded more space, and with the beginning of this year we have entered into greatly enlarged quarters for which we are again indebted to the Donaldson Company. When the plans, which have been partly drawn, are completed we shall have ample accommodation for our library and reading-rooms and for special committee rooms for years to come.

Though our income has grown with our membership, our expenses seem to have increased in even greater proportion, and for the last three years we have barely kept our expenditures within the limits of our income, and we have added nothing to the building fund since 1914 and practically nothing since 1909. With our largely increased quarters it is possible that we could receive as tenants certain other organizations, which would help us to meet our ordinary running expenses. The adoption of a budget system by the Executive Committee the past year should also improve our financial condition. Should we be so fortunate as to receive a legacy, we could easily expend it in improving our library, which, though fair in quality, is far from being complete, and cannot be much extended from our ordinary sources of income. As librarian last year and the preceding year I expressed the hope that some of our members or their families would see fit to endow libraries in special fields which would serve as a fitting memorial to some of our members, and I am pleased to announce this evening

*President's Address before the Hennepin County Medical Society, at its Annual Meeting, January 7, 1918.

the gift of two such foundations of twenty-five hundred dollars each, one by Dr. W. A. Jones, in Nervous and Mental Diseases, and one by Dr. Charles J. Spratt in Ophthalmology, Otology, Laryngology, and Rhinology. I hope these are only the beginning and that others will follow in due course.

The number of papers offered for our programs is certainly not growing, and is probably decreasing. The provision of a proper program means a continued effort on the part of the program committee. More and more, of late years, our program has been given over to symposia on subjects of special interest, and, though these seem to have been satisfactory to the Society, they have certainly resulted in lessening the demand for special contributions on original work done by members of the Society, and more and more work of the latter class finds its way into the special societies that have grown up in our midst. That these special societies should be incorporated as subsidiary organizations of the parent Hennepin County Medical Society is certainly to be desired; and, with this end in view, I offered an amendment to the constitution some years ago providing for such relationship and this was adopted, but up to date no organization has been so accepted.

For some years past, it has been a growing opinion among close observers that matters referring to public health are gradually passing out of the control of medical practitioners, partly into the hands of a specialized group in our own profession, public-health officers, and partly into the hands of laymen. If the Hennepin County Medical Society is to maintain its interest in, and a degree of control over, these matters, it is necessary that we should organize ourselves more effectively in this direction; and to this end I believe we should have appointed a special committee of the Society dealing with public-health matters. The spasmodic efforts of occasional committees appointed to deal with special situations are entirely insufficient to cope with present conditions; and, without greater effort on our part than we have shown for some years past, we shall shortly find the great public-health movement carried on entirely independent of ourselves. One of our first efforts should be to secure the active co-operation in our Society of all the public-health officers resident in our district, most of whom at the present time are relatively inactive. We should also be able to find among our members, especially among those whose success

in practice has been most notable, a greater willingness to devote the necessary time to the various public-health problems, even though it must be at the expense of the fruits of active practice.

During the last year we have lost from our membership, through death, three men, Drs. O. J. Evans, J. B. Gould, and Adolph Loberg, a complete necrology of all of whom has been presented at our meetings by the proper committee. Twenty-seven new members have been added during the year.

It is probably known to most of our members that about the year 1889 the minutes of our Society were lost or destroyed, and at the present time we have accurate records of our transactions only as far back as 1909. In 1870 our founder and first president, Dr. A. E. Ames, read a paper giving a short account of the members of the Society who had died or removed from Hennepin County since the Society's organization, and this paper was preserved in the *Northwestern Medical and Surgical Journal* for August, 1870; but, unfortunately, Dr. Ames said nothing of the organization of the Society other than the date—nothing of its early activity or of the medical conditions in the early years of Minneapolis. In 1901 Dr. Edwin Phillips prepared and read a paper dealing with the early days of the Hennepin County Medical Society; and this paper was published in the *Northwestern Lancet* for September 15, 1901; and at the February, 1913, meeting of the Society Dr. James E. Moore read a paper entitled "Thirty Years' Experience in the Medical Profession in Minneapolis." Beyond these papers I have not been able to find any articles dealing with the development of medicine in this immediate district. Under such circumstances, with no official records remaining and with no one now living who was connected with the early organization of the Society, to say nothing of the uncertainty of memory of those who have second-hand information of our early activity, the preparation of this paper has been no small task. In an attempt to secure the necessary information, begun six or seven years ago, naturally my first thought was to refer to certain of our older members, now gone, but I early gave this up as an unsatisfactory source, and the most of what is given herein has been derived from a careful reading of all the papers and directories published in Minneapolis in the early days of the city, supplemented by such information as I have been able to secure from a few of our pioneers still surviving. Fortunately,

the earliest papers were not dailies, and were not so voluminous as those of the present time, but, even as matters stand, an immense amount of reading has been necessary, and, if my wife had not volunteered for the task, it would never have been done. I may add that to her work is largely due the preparation of this paper.

As an illustration of the difficulties of the situation the following will suffice:

The St. Paul City Directory of 1856-57, published by Goodrich and Somers, January, 1857, has this record: "Medical Society of Minnesota organized Dec. 1855. Officers for 1856-57: Dr. Thos. Potts, Pres.; Dr. J. H. Murphy, Vice-Pres.; Dr. J. V. Wren, Rec. Sec.; Dr. James D. Goodrich, Cor. Sec.; Dr. David Day, Treas. Censors: Drs. W. H. Morton, F. R. Smith, J. H. Stewart, A. E. Johnson, A. E. Ames. Standing Com.: Drs. R. W. Wing, O. P. Marsh, C. L. Anderson." The same date is given in an "Historical Account of the Origin of the Minnesota State Medical Society" read at the 1869 meeting and published in the transactions of that year.

On October 12, 1853 we find in the *Boston Medical and Surgical Journal* an article by Dr. Wm. W. Finch, of St. Paul, entitled "Physicians, the Climate and Diseases in Minnesota Territory," in which he says: "On the 23rd of July, 1853, the first medical society was organized in this territory, and christened 'The Minnesota Medical Society.' Considering that there are scarcely twenty regular physicians in the territory, the meeting was well attended, matters were discussed in a friendly manner, and the following officers chosen: Dr. Potts, of St. Paul, President; Dr. Ames, of Minneapolis, and Dr. Murphy, of St. Anthony, Vice-presidents; Dr. Anderson, of St. Anthony, Recording Secretary; Dr. Goodrich, Treasurer; Dr. Mann, Corresponding Secretary; Drs. Day, Dewey and Finch, Censors. The last five officers are residents of St. Paul. Though few in numbers, we mean to do what we can to sustain and advance medical science in this new Territory, and we hope to receive the good wishes at least of the older societies in the States."

Until Mrs. Jones, our assistant librarian, brought this 1853 article to my attention, I had no doubt but that the St. Paul directory of 1856-57 and the State Society itself spoke with authority when they said that the State Society was organized in 1855. The same sad experience has several times attended my attempt to correlate the scanty facts I have been able to scrape together in regard to the Hennepin County Society

and the early history of medicine in Minneapolis.

As already mentioned, our early records were destroyed and these researches were begun primarily to make good this lack of history. But papers were absent or very scarce in early days, and items regarding doctors were even more scarce. When found they often did not agree in details and dates with accounts given in other places by early writers, and, even if accessible, they have been deleted and corrected to a degree greatly impairing their authority by later medical readers who evidently disagreed with the recorded matter.

The first physician of Hennepin County, or what afterwards became Hennepin County, was Dr. Purcell,¹ who accompanied the army to Fort Snelling in 1820 as surgeon, and remained here in that capacity for some years. All of the land on the west side of the river, where the major portion of Minneapolis now stands, was part of the military reservation, and remained so until 1855, when it was thrown open for settlement. Provisional claims had been made, however, and settlers had been present even previous to that date, as we shall see. The first building² between the Mississippi and the St. Croix Rivers was a claim shanty, which was soon replaced by a log house, built by Franklin Steele in July, 1838, on the river bank abreast of the Falls of St. Anthony. In the fall of 1847 Mr. Steele, who had established his pre-emption claim to the site of St. Anthony, consisting at that time, of a blacksmith shop, a carpenter shop and five dwelling houses, one of which contained a small store,³ began the erection of the first saw-mill, which was put into operation in the late summer of the following year. At that time St. Anthony with little Canada, a settlement north of St. Paul, was said to have a population of 571,⁴ which we must look upon as having been a very liberal estimate.

In 1849 the population of St. Anthony nearly doubled, and amongst those who arrived in that year were William R. Marshall, afterward Governor, and his brother. With pioneer promptness they came, hauled logs cut by their own hands in '47 on a previous visit, built two cabins therewith, and in one of them opened St. Anthony's first real store. William R. Marshall surveyed and laid out the town of St. Anthony, fourteen and one-half blocks up and down the river, and four blocks back. The street beginning oppo-

1. Stevens' Lyceum Address, 1856.

2. Statement of Dr. W. W. Folwell.

3. Northwestern Democrat, November 10, 1855.

4. Minnesota Year Book, W. G. Le Duc, December, 1851.

site the Falls, now Third Avenue Southeast, was Cedar; then followed Spruce, Spring, Maple, Walnut, Aspen, Birch, and Willow, the last being now named Tenth Avenue Southeast. Up the river and parallel with it were Pine, Mills, Bay, Linden, and Oak, now, respectively, First and Second Avenues Southeast, Central, and First and Second Avenues Northeast.

The first civilian physician of whom we can find any mention in St. Anthony was Dr. Ira Kingsley, an herbalist. Dr. R. J. Hill recalls him as a big man with a gray beard, who as the city's first constable in 1861 and 1862 used to patrol up and down watching for fires in Bridge Square, which was then the business center. Dr. Kingsley probably came in the spring of '49, and does not appear at any time to have emphasized his medical attainments, figuring more frequently as a justice of the peace. He may well have been intimidated by the stern founders of St. Anthony, who apparently felt that the presence of physicians would damage the reputation of Minnesota as a health resort, and strongly discouraged them at every opportunity. This pose on the part of the papers and public speakers is noticeable throughout all the early years of the settlement, and Mr. Goodhue, the brilliant editor of the first paper of the Northwest, the *St. Paul Pioneer*, says, in an article called "Who are Wanted in St. Anthony": "Physicians, the *Express* [the St. Anthony paper] does not want at all for any purpose, seeming to regard them as a fifth wheel of a coach *in* their profession and incorrigibly idle *out* of it."

Dr. Kingsley lived in a shack on Hennepin Island, the whole of which he claimed as he had jumped Franklin Steele's previous claim.⁶ Later they compromised, and Dr. Kingsley took the southwest part of the Island, beginning near the Falls, where is now the East Side Waterworks, and Mr. Steele took the remainder.

In spite of Dr. Kingsley's retiring disposition, and in the face of the opposition of the city fathers to medical men, his services were demanded in at least one emergency, the account of which has come down to us. The founders of St. Anthony had made no provisions in their arrangements for a natural increase of population and for the conventional idea of womankind that on the occasion of a natural increase the presence of a physician is required. The first time we hear of a call for a doctor was in September, 1849,

the result of a charivari at the wedding (the second⁷ in the settlement) of Miss Amanda Huse and Mr. Lucius Parker. Across the road from Miss Huse lived Mrs. Godfrey, who at this time was hourly expecting confinement, and, hearing the ungodly noise, she must needs take it into her State-of-Maine head that it was Indians on the war-path, a thought of such disastrous consequences that Mr. Caleb Dorr, then boarding with the Godfreys, was dispatched post-haste for Dr. Kingsley, "St. Anthony's only physician." Mr. Dorr's hurried exit effectually scattered the revellers. He took a small canoe and rowed to the island, where he found the doctor, but he met an unexpected difficulty when Dr. Kingsley refused to enter a craft which was quite evidently several sizes too small for him. Mr. Dorr, with a courage born of desperation, forced the physician to his knees in the old canoe, and paddled off with him before he had time to change his mind or posture. Says Mr. Dorr: "After a stormy passage [due more to the Doctor's temperament than to the weather, we surmise] we arrived in St. Anthony." Here Dr. Kingsley had the honor of presiding at the birth of the first white child born in St. Anthony, Miss Harriet Godfrey, who is still among us.

Dr. John H. Murphy, St. Anthony's first regular physician, came up the river with his wife in the spring of '49.⁸ He returned later to Rush Medical College, graduated, and began practice, probably at that time. He is mentioned in various lists of physicians as having become established here in 1850. Evidently he was not practicing in St. Anthony in September, 1849, when Miss Godfrey was born. The first medical advertisement which I found was in the *Minnesota Chronicle and Register* of September 23, 1850, and reads thus: "Dr. John H. Murphy, Front Street, a short distance below the mill, St. Anthony, Minn."

The world to which Dr. Murphy came was a very different place from the Minneapolis in which our pleasant paths lie. The west bank was practically an unbroken wilderness as had been the east bank but a few months before. Goodhue gives us a good picture of St. Anthony in 1850 when he says⁹: "This place stands unprecedented in the record of its march for improvement. Less than ten months ago, after it was founded, the first house was built upon the lot given to the first settler. Now there are near-

5. *St. Paul Pioneer*, June 26, 1851.

6. Notes on Early St. Anthony. R. P. Upham.

7. Old Settlers' Address. Col. Stevens, State Atlas, February 27, 1867.

8. Statement of Mr. Caleb Dorr.

9. *St. Paul Pioneer*, January 23, 1850.

ly one hundred buildings and six hundred inhabitants. The saw-mill has four saws with a dam capacity of running eighteen; also a first rate lath machine. There are five stores in the place and one grocery. A fine steamboat is now building to take hundreds of delighted visitors next summer up the romantic Mississippi above the falls."

All around the little settlement was the primeval forest. Mrs. E. A. Chatfield tells me that in her childhood the boom of the falls was her lullaby in her home at the corner of Tenth Avenue Southeast and Fourth Street, and it is said that the sound was audible in St. Paul. This seems almost incredible when we view today the remains of the cataract, but we must recall that it was a real fall in 1850, and, besides, there was little competition in the way of noise save that of the mills or a woodman's axe. But stay, we are forgetting another sound that at intervals broke the silence and which most of us have never heard and never shall: "Cre-a-k, over one hundred Red River carts driven by dirty looking halfbreeds and laden with furs of all kinds from Pembina and the British possessions to exchange for a return load of groceries and life's necessities have drifted down past our office during the past week. This is no unusual occurrence and hundreds more will go by this season. What queer, quaint things they are, these wooden carts (without a nail or single piece of iron about them) and a sober plodding ox tethered to each with tow and leather strings, not a morsel of grease upon the polished oaken axle, and down the street goes the tortuous line of gypsies. Cr-rr-eak, sque-a-k, cr-r-rr-ea-k, a caravan of grimy pilgrims that seem a chain between civilization and savagism and between the past and the present."¹⁰

These carts came down the Anoka road, squawked their way through St. Anthony to St. Paul, furnishing en route one of the chief sources of entertainment of the pioneer communities, a combination of movies, circus and brass band, especially the latter, only more so, for it is said they were audible three miles away. As they pursued the uneven tenor (and bass) of their way through St. Anthony one summer day, their stolid drivers might have seen as did Judge Lochren (who related it to Dr. Folwell and he to me) Dr. Murphy, happily unconscious of germs and as apathetic in regard to vermin as a modern

trench surgeon, sitting on the steps of his office bandaging the heads of some Chippewas wounded in the battle of Shakopee, and surrounded by "human varrious" in the way of Indians and half-breeds.

Here is another picture of Dr. Murphy at work, given by Col. John H. Stevens, the first white settler on the west bank of the river: "The morning of April 30, 1851, was the coldest for the season ever known in the country. The wind was blowing from the north like a hurricane. The air was full of snow. The river bank was full and the waves were high. It was deemed almost impossible to cross the river either in a batteau, skiff, or canoe. It was necessary that I should have communication with St. Anthony for the services of Dr. Murphy, who resided there, were required in my family. The aid of three as good boatmen as ever swung an oar, with Capt. Tapper at their head, was secured. The question was anxiously discussed: Can any water craft at our command withstand the fierce wind, high waves and swift current? Capt. Tapper thought one large batteau could weather the storm, but we were short of hands. Fortunately Rev. C. A. Newcomb, of the Methodist church, on the east side, joined us. He had remained over night with my neighbor, Calvin Tuttle. With much difficulty and some danger the crossing was made and they safely returned with Dr. Murphy. About noon on that bleak, cold, eventful day my first child and the first born white child on the west bank of the Falls was added to my happy household." She died of tuberculosis, aged sixteen.

Dr. Murphy would seem to have been of the type of man created for pioneer practice. With unquestioned ability, he possessed, in addition, a fund of vitality, good humor, wit, and high spirits, which are almost as necessary in a pioneer physician as medical skill. He always wore a Prince Albert coat, in one pocket of which he was said to carry a spool of silk, and, if there was any surgery to perform, he would take out the spool, cut off a piece of silk, sharpen his pocket-knife on the heel of his shoe, and say to the patient: "This is going to hurt and hurt like Hell, but I can't help it, so look out."¹¹ Much as they relied upon and valued his professional ability, however, his old neighbors are more apt to dwell in reminiscence on Dr. Murphy's social qualities, and so we hear of how a court,¹² with Murphy as judge, would suddenly find itself in the streets of St. Anthony, and said stranger

10. The Falls Evening News, July 16, 1859.

11. Statement of Dr. R. J. Hill.

12. James Mullen in "Old Rail Fence Corners."

would unexpectedly discover that he was arrested for some such crime as spitting on the sidewalk—an impossible feat, not from lack of expectoratory power in the pioneers, but owing to the absence of sidewalks. If he were a wise stranger he recognized his obligations, and offered to treat the court, which immediately and joyously adjourned *sine die*.

Another glimpse we get of Dr. Murphy on the occasion of the marriage of the erstwhile widow Dorr to Dr. Jodon in '54. No wedding was complete without a charivari, apparently, and the choice spirits of St. Anthony rallied on this occasion to do honor to the Doctor and his blushing bride. Their most strenuous efforts to bring forth the groom, however, were unavailing until some bright citizen proposed the application of a board over the chimney as a powerful persuader. It was. A very irate man appeared, vowed vengeance, and in the morning was still breathing fire and brimstone and seeking to discover the perpetrators of the foul deed. The first person he met in his quest was one of the most confirmed practical jokers in St. Anthony, which seems to have been well supplied with that article in this early day. The Doctor was surprised and pained to learn that the charivariers included in their ranks the elite of St. Anthony, chief among them Dr. John Murphy. Murphy with the others were arrested, and appeared next morning in the police court. Dr. Jodon, whatever his medical attainments, certainly lacked a sense of humor. His name appears in lists of physicians sometimes as "B." sometimes as "Z." Jodon, and I have seen a reference to the two Jodons, though assured by those who should know (Mr. Dorr and Dr. Foster) that there was but one—he came in 1853.

The *St. Anthony Express* of November 1, 1851, introduces to St. Anthony a man who was to play a very important part in the development of the two towns and to be the pioneer of the profession on the west side of the river, as Dr. Murphy was on the east. This advertisement announces his arrival: "Drs. Murphy and Ames will continue the practice of his [*sic*] profession in St. Anthony and vicinity. Office, etc." And here is the editorial notice which the *Express* condescended to bestow on a mere doctor:

"Dr. A. E. Ames at this time is a resident of St. Anthony, and it is to be hoped permanently. By a reference to our advertising columns it will be seen he has formed a business connection with Dr. Murphy. Dr. Ames brings with him the esteem and best wishes of a host of friends,

among whom are some of the most prominent citizens of Illinois." Dr. Ames was a graduate in the first class from Rush and came to St. Anthony from Roscoe, Illinois. He had been assistant secretary of state in Illinois for four years. A volume might be written on Dr. Ames, and his beneficent activities in Minneapolis. Stevens says of him: "He held many offices without stint or limit." He most assuredly did, but, after all, perhaps no more beautiful tribute can be paid him than was given by Mrs. Hannah Munson when she said, "He was awful good to poor folks, was Dr. Ames. Never charged them nothing and was as good to them as to richer people." Immediately on his arrival here he filed a claim on the west side of the river, and moved there in 1852.

Dr. Hezekiah Fletcher came also in 1851, and became a prominent citizen of old Minneapolis, though not in a medical way. He was the third man to take a residence claim on the west side of the river, as well as the third man to represent Hennepin County in the legislature. His name appears occasionally in lists of physicians, but he is said to have been principally interested in real estate. He built a small house on a site which is now Portland Avenue, between 14th and 15th streets, at that time considered far back in the country.

In 1851, too, came Dr. N. E. Morey, whose card "respectfully offers his professional services to the City of St. Anthony and vicinity. Dr. Morey will attend to all operations in the practice of dentistry when not engaged in the practice of medicine and surgery. Dr. Morey can be found at all hours at his office on Main street near Mr. Russel's store." Certainly, Dr. Morey was not likely to be caught by the gentleman who is on the lookout for those with idle hands.

Advertisements in these old papers were at times quite flowery, and were, as we shall see later, even poetical. But this one, though not medical, is not so far removed from surgery, since it is the work of the barber, or shall we say a tonsorial artist?

"Mr. Highwarden, St. Anthony's hair dressing saloon, late from St. Paul, gives notice to the bearded people of St. Anthony that he has opened the rooms in their flourishing and enterprising town [subtle flattery from a former citizen of St. Paul] for the practice of the tonsorial art in all its varieties and manifestations, including plain and ornamental shaving [into what dreams and nightmares of sideboards, goatees, imperials, and

chin draperies does this not lead us?], capillary amputation and shampooing." What was the fate, one wonders, of this bombastic Highwarden? He sounds as if he had just escaped from one of Dickens' novels.

There would seem to have been no farther addition to St. Anthony's medical ranks in 1851, which, perhaps, was just as well, since the papers and public speakers were still loudly vociferating that there was no work for them and to stay was to invite starvation. The St. Anthony paper must have been edited by an early brand of Christian Scientist or else the editor was "blind of an eye," for, while his editorials loudly proclaim that no one dies in this splendid climate save of old age, the news items in almost every issue chronicle deaths from tuberculosis. Further light is thrown on this situation by an article of Dr. Mattocks in the *Northwestern Medical and Surgical Reporter* of September, 1871, Vol. 2, No. 3. Mattocks quotes from the *Philadelphia Medical and Surgical Journal* a statement that the climate of Minnesota had changed in the past fifteen years and that, on account of the cutting of the pines, the climate was no longer suitable for tuberculosis. Mattocks denied that there had been any change, and also quoted from the Secretary of the Y. M. C. A. of St. Paul as follows: "Our Association has spent hundreds of dollars the past year, without counting the days and nights of watching, in providing homes, comforts, and coffins for Christian young men who have come here from Boston in search of health, but in reality have found only a grave." Perhaps the safest deduction from the whole discussion is that the climate never had been specially suitable for tuberculosis.

However, the doctors would appear to have gone their quiet way, calmly awaiting the issues of life and death. If they received no encouragement from the local press, they were at least not flayed alive, as happened to an unfortunate professional brother in St. Paul who fell foul of Mr. Goodhue with the following sinister results:

"Dr. C. Rich and family [he professed to be of the eclectic school of medicine] left by the Nominee last week, being in debt to many people in St. Paul and especially to the printer. This reminds us of the old maxim, 'Riches take to themselves wings and fly away,' and we cannot help heartily and meekly responding, 'Give us, Oh Lord! neither Poverty nor Riches.' Cheerfully would we forgive any poor fellow in debt who was man enough to say, 'Sir, I owe you, but am

poor and I cannot pay you.' As for that man, dressed in black broadcloth, this office will try to have the man's character properly appreciated wherever he may go.

"Dr. Rich is about thirty-three years old, five feet ten inches or eleven inches high, slender, bilious, black hair, black eyes, smells like an apothecary shop, and looks like the ghost of bilious fever. Wherever he finds employment as a physician there will be employment for the undertaker, and, if he does not lose his patients, it will be because he can find none. As a surgeon he would only do to call in case of broken neck or a shot through the heart; or as a physician in the last stages of cholera or consumption when it is too late. But to do him justice, he was a very good collector of his own fees and would take the last shirt from any poor patient who by accident or miracle survived his treatment."¹³

No doubt the members of the St. Anthony profession on reading this felt that the studied indifference of the local press was not without its compensations.

The year 1852 was an uneventful one as far as the medical profession was concerned. Charles L. Anderson appears to have been the only addition to the list of physicians. He arrived in May from Indiana. Stevens gives the following account of him: "He was a geologist, entomologist and florist of rare industry and attainment. He contributed many articles to the press. Early in the sixties he moved to the Pacific slope. Tarrying a few years in Nevada, he made there a very complete catalogue of flora. For twenty years he has been resident in Santa Cruz, California, where his skill and attainments as a scientist are widely appreciated. His two daughters are talented in a literary and artistic way."

The *Express* of January 3, 1852, has this item which is not uninteresting as showing conditions in the settlement and also the tone of the press toward physicians: "In reply to a letter as to the number of inhabitants of St. Anthony we can only venture an approximation. Last spring we numbered a thousand. Since then Dr. Murphy informs us he has assisted at seventy births in all of which both mother and child are doing well. As we have five other physicians in the place, allowing each an equal number would give us a natural increase of three hundred and fifty. * * * [Note the sophistry, as Dr. Murphy had the practice of the city.] In regard to the health of the place, a most satisfactory report

13. St. Paul Pioneer, September 4, 1851.

may be given. People who comply strictly with the laws of health and do not employ a doctor never die except of old age." This is one of the ways in which the St. Anthony census was padded.

Here is another piece of news from a February, 1852, paper: "The Legislature of Minnesota is composed of three farmers, five lumbermen, eight merchants, one innkeeper, four bookkeepers, two lawyers, one mason, one painter and two physicians. * * * Drs. Day and Murphy are the first disciples of Aesculapius that ever had the honor of representing the people of Minnesota in the collected wisdom of the territorial fathers."

Hennepin County (on the west side only of the Mississippi) was organized October 21, 1852. Col. Stevens says, "At the election held at my house eleven days previous, there were 73 votes polled which comprised about half the voters. At a mass meeting held previous to the election the citizens nominated, irrespective of party, the following: A. E. Ames, Representative, etc. * * * All of these candidates positively refused to stand but the meeting as positively refused to excuse them. They were elected and were the first officers of Hennepin County. The first physician in the county was Dr. A. E. Ames, who dates this part as his home from October 18, 1851."¹⁴

A territorial temperance society was instituted in this year by Drs. Fell (dentist), Fletcher, and Ames, and the latter was, during the same year, made surgeon at Fort Snelling.

Also, I am sure, every loyal Minneapolitan will be glad to know that Minneapolis was just as positive then as now that she was at the head of navigation. Here is an account from the *St. Paul Pioneer* of how she proved it, and the reply of the St. Anthony paper:

"Wednesday at half past twelve the Franklin Steele No. 2 in consideration of the payment of \$500.00 paid by the St. Anthony citizens to make good their claim, undertook to make a trip to the head of navigation (with the hair on). Anxious to congratulate our sister city [note the fine irony] on the success of her undertaking we reached Cheevers at three o'clock p. m. At 4 p. m. the boat hove in sight three miles below. At 6 o'clock she was within less than a mile of Cheevers, where she kicked and bunted away at the rocks till dark trying every inch of the channel for a passage. Finally she managed to get

a line ashore and tied up for the night. She had no passengers but a few people of St. Anthony and a bill of hardware (three files) for the mill company."¹⁴

The answer from St. Anthony is as follows:

"St. Paul had a nightmare on Tuesday night occasioned by her fears that St. Anthony was about to convince the public that she was at the head of navigation. * * * Meanwhile the boat proceeded leisurely to the falls and to convince himself as well as to stop the cavils of our incredulous neighbors, the captain paused at every point of pretended danger and sounded. Water everywhere—channel perfectly safe—current scarcely sufficient to float the boat down when the wheels were motionless. Solely for the benefit of St. Paul friends the captain took some two or three hours to make the trip which at any time can be made in three-quarters. Having found a great abundance of water, the boat landed a short distance below Cheevers. He declined going up to the warehouse, not that *he* saw any *rocks* but our sister city had sworn so earnestly, repeatedly and sincerely that there *were* rocks in the river, that it must be so. He required our citizens to insure his boat against rocks and boulders. A dozen names were at once signed. The boat steamed up and at once glided like a duck safely and steadily to Wilson's warehouse—water from four to six feet deep. We forgot to say that St. Paul sent a large delegation of her most prominent citizens, Wednesday and Thursday, who lined the banks of the river, as the boat was coming up, shouting at the tops of their lungs 'boulders, rocks, *boulders*, sandbars.'¹⁵

The year 1853 saw three additions to the medical ranks,—Drs. A. E. Johnson and Z. or B. Jodon (he of the charivari), and Dr. White. We have few data in regard to Jodon, but Johnson became one of the prominent physicians. He was an inveterate smoker, and always had a long meerschaum pipe hanging from his mouth. The following story is told of him, and may serve to illustrate some of the rough-and-ready ways of pioneer physicians. On one occasion when Johnson was testifying in court, the judge announced the hour of closing, but Johnson said: "Hold on a minute, I have a little more to say," and went on with his testimony and, when done, said to the judge: "Now, that's all, you can go."¹⁶

14. *St. Paul Pioneer*, July 1, 1852.

15. *St. Anthony Express*, July 2, 1852.

16. Statement of Dr. A. W. Abbott.

Dr. J. White was a graduate of the Medical College of Brunswick, Maine, and practiced here to his death, which occurred in 1856 at the age of thirty-three.

In the *St. Anthony Express* of February 4, 1854, we find the following note: "We requested recently of Dr. Ames a statement of the number of deaths in Hennepin County the past year. The following was handed us by him in reply thereto. We believe Dr. Ames is the only practicing physician in the county and our readers may be assured it is correct. Hennepin County has a population of over 2,000 and it appears there were six deaths during the past twelve months in the whole county. * * * The County of Hennepin is situated on the west side of the Mississippi and between the Minnesota and the Crow Rivers, containing an area of 25 to 35 miles."

In July of this year Dr. L. Bristodeau began practice opposite Francis Huot's house on Main Street, St. Anthony. He later went to Dayton.

A column of short notes in the *Minnesota Republican* of 1854, a short-lived paper, has the following facetious items: "Dr. Johnson will cure your eyes. Dr. Fell will fill or extract your teeth. Dr. Anderson will attend to your system generally."

In October, 1854, Drs. A. R. Lincoln and C. W. LeBoutillier were added to the practicing physicians.

January 23, 1855, saw the opening of the Mississippi suspension bridge, which crossed the river at about the site of the present Central Avenue bridge, and Dr. J. H. Murphy was marshal of the day. The *Express* says of the event: "To the private citizens of St. Anthony and the County of Hennepin belongs the credit, we should say the honor, and glory of constructing the first bridge that ever carried a living being across the great river of the North American continent."

Dr. Murphy was one of the six members who urged its building, and, in spite of opposition, carried it to a successful issue.

In February, 1855, we find Dr. A. E. Johnson dropping into poetry in a friendly way, thus:

Dr. A. E. Johnson, Occulist [sic], would say to those who exclaim with Milton:

"A drop serene hath quenched my orbs

"Come then and

"Take thou some new infection to thine eye

"And the rank poison of the old will die."

Evidently, Dr. Johnson was here vaguely suggesting our modern views of vaccine therapy.

In 1855 the *St. Anthony Express* begins to warm up a bit toward the doctors. Probably the editorial baby had been ill, and, in September, after informing us that Dr. Leonard is putting up his own gravel house and henceforward it will no longer be an experiment that gravel houses [they are stucco now] can be erected at half the cost of other material, it goes on to say this: "The Doctor merits success not only in the matter of gravel wall, but in his profession. He has but lately come among us but has already added to a reputation that before was spotless."

Doubtless the *Express* meant well, but why should they spot a "spotless" reputation.

In October, '55, there was published in the *Express* a history and business directory of St. Anthony in which was included the following list of physicians:

"St. Anthony:

"Dr. J. H. Murphy, Main Street, established 1850. He was the third physician in Minnesota.

"Dr. A. E. Johnson, established 1853.

"Dr. C. W. LeBoutillier, established 1854.

"Dr. Z. Jodon, Second Street, established 1853.

"Dr. J. A. White, Main Street, established 1853.

"Minneapolis:

"Dr. A. E. Ames, Fifth Street, established 1852.

"Dr. C. L. Anderson, Second Street, established 1855.

"Drs. Leonard & Wheelock, Hennepin Avenue, 1855.

"Dr. Rouse, 1855."

In December of this year Dr. Wheelock removed to Clearwater.

Dr. Rouse has not been previously mentioned. He became quite prominent later in Civil War days, but we have no earlier information in regard to him. An account of LeBoutillier will be given later.

(To be continued)

FRACTURES AND MALPRACTICE SUITS*

By C. L. YOUNG, Esq.

Of the North Dakota Bar

BISMARCK, NORTH DAKOTA

It is undoubtedly true that a majority of malpractice suits are instituted for negligence in the treatment of fractures. This is probably due to the fact that to the average layman unsatisfactory results in these cases are more apparent and certain than in others. The professional obligations of a physician or surgeon to his patients in such cases are identical with those required in the treatment of any other ailment or disease. However, I shall discuss the subject with fractures only in mind, and in preparing this paper I have made use only of judicial opinions written in cases of this character.

DEGREE OF SKILL AND CARE REQUIRED

The liability of a physician or surgeon in reducing a fracture hinges upon the degree of learning which he is obligated as a matter of law to possess and exercise. In offering his services to any individual in his professional capacity he impliedly contracts with his employer, that is, his patient, as follows:

1. That he possesses that reasonable degree of learning, skill, and experience which is ordinarily possessed by the members of his profession, in good standing, as a whole.

In all cases where skill is required it is understood that it means ordinary skill in the employment undertaken. One is not presumed to engage for extraordinary skill, which belongs to a few men only, or for extraordinary endowments or requirements. Reasonable skill constitutes the measure of the engagement. A surgeon does not undertake to use the highest possible degree of skill. There may be persons who have higher education and greater advantages than he has, but he undertakes to bring a reasonable, fair, and competent degree of skill.

2. He contracts, further, that he will use reasonable and ordinary care and diligence in the exercise of his skill and the application of his knowledge to accomplish the purpose for which he is employed.

He does not contract for extraordinary care, or extraordinary diligence, any more than he does for uncommon skill. The general rule is well settled, as in every case of contracts supposed to be mutually beneficial to the parties, that

the contractor, for services to be performed for another, agrees to exert such care and diligence in his employment as men of common care and common prudence usually exert in their own business of a similar kind. He agrees to be responsible for the want of such care and attention, and he stipulates in no event, without an express contract for that purpose, for any greater liability.

There is no pretense that a physician is bound by any other rule than that which governs all classes of men employed in works or services requiring skill,—the rule of ordinary care and diligence. There is of course a difference in different cases as to what constitutes ordinary care, depending upon the importance or delicacy or difficulty of the thing to be done. Different things may require very different care. The care required in building a common doorway is quite different from that required in raising a marble pillar, but both come under the description of ordinary care. Such differences exist among cases requiring medical attention, but the common rule still applies, which requires such care and diligence as men in general of common prudence and ordinary attention usually apply in similar cases, and not the extraordinary care which might be applied in such a case by very careful and prudent persons.

3. In stipulating to exercise his skill and apply his diligence and care, a medical man contracts to use his best judgment. Few cases can be supposed whereby a single course of measures alone can be adopted, and many occur where great difference of opinion may exist as to the best course to be taken. In most cases judgment and discretion are required to be exercised. Freedom from errors of judgment is never contracted for by a physician.

Ordinary good judgment is necessarily implied in the possession of ordinary skill; and, if such share of judgment is fairly exercised, any risk from mere errors and mistakes is upon the employer alone. He, too, has judgment to exercise in the selection of a physician; and, if he makes a bad selection, if he fails to choose a man of the best judgment, the result is fairly to be attributed to his own mistake, and is not to be visited upon the man who has honestly done his best in his service.

*Read before the Sixth District Medical Society of North Dakota at Bismarck, January 15, 1918.

APPLICATION OF THESE PRINCIPLES

While the general principles governing the liability of a physician or surgeon are well defined, the great difficulty consists in their application. If one contracts that he possesses ordinary skill, which he will exercise with ordinary care, according to his best judgment, it follows that he is liable if he does not possess the skill for which he has contracted, or if he fails to exercise the degree of care and prudence which he is obligated to exercise, or if he fails to use that quality of judgment which it is his duty to employ. But when does he possess less than ordinary skill? Under what circumstances may it be said that he has failed to use the degree of care and diligence to which the patient is entitled? In what cases is there liability for a faulty use of judgment? These inquiries, and scores of others which suggest themselves to you in your practice, lead to certain considerations which, I believe, are as well defined as the general principles to which I have adverted. Such considerations are the following:

1. The skill or ability required is that which physicians of ordinary ability and skill practicing in similar localities, with opportunities for no larger experience, ordinarily possess.

It has sometimes been said that the skill required by a physician is that ordinarily exercised in the profession in the locality where he practices; but this is not the correct standard. The criticism upon such a rule is forcefully stated by an eminent judge thus:

It seems to us that physicians or surgeons practicing in small towns or rural and sparsely populated districts, are bound to possess and exercise at least the average degree of skill possessed and exercised by the profession in such localities generally. It will not do, as we think, to say that, if a surgeon or physician has exercised such a degree of skill as is ordinarily exercised in the particular locality in which he practices, it will be sufficient. There might be but few practicing in the given locality, all of whom might be quacks, ignorant pretenders of knowledge not possessed by them, and it would not do to say that, because one possessed and exercised as much skill as the others, he could not be chargeable with the want of reasonable skill.

Under the correct rule a country surgeon is not bound to the exercise of that high degree of art and skill possessed by eminent surgeons living in large cities and making a specialty of the practice of surgery, but only to that reasonable degree of learning and skill ordinarily possessed by others learned in his profession and practicing in similar localities.

In passing on this question for the first time

the Minnesota Court, in a recent case, says that it is plainly correct that the locality in which the physician or surgeon practices must be considered in determining whether he has the requisite skill and learning; but that he is not bound to possess and exercise only that degree of skill and learning possessed by other practitioners in the same locality, if by that is meant the same village or city. Attention is called particularly to the fact that the physician or surgeon in a village is no longer hampered by lack of opportunity for advancement. Frequent meetings of medical societies, articles in medical journals, books by acknowledged authorities, and extensive experience in hospital work, put the country doctor on more equal terms with his city brother. He would probably resent an imputation that he possesses less skill than the average physician or surgeon in the large cities, and for that reason the court is unwilling to hold that he is to be judged only by the qualifications which others in the same village, or similar villages, possess.

This case is at least an indication of a changing rule and of a holding of the country practitioner to stricter accountability. As the means of communication with physicians and surgeons in the larger centers, and the facilities for association with them, increase, it may be expected that the standard of learning which will be required of physicians and surgeons outside of these centers will be materially raised, so far as their liability in malpractice suits is concerned.

The rule discussed implies the corollary that, in determining the degree of learning and skill required of a physician, regard must be had to the state of medical science at the time. The law has no toleration for quackery. What was good practice in the profession fifty years ago undoubtedly has been relegated as unworthy the practitioner of today. The demand is for qualification,—reasonable skill and diligence, not extraordinary skill, such as belongs only to a few men of rare genius and endowment, but that degree which ordinarily characterizes the profession; and in judging of this degree in a given case it is necessary to take into view the thought and practice of the profession at the time.

2. The rule as to the requisite degree of learning imposes upon one who holds himself out to the public as a specialist a higher degree of skill and care than is required of the ordinary practitioner.

Thus one holding himself out as a specialist is bound to bring to the discharge of his duty that

degree of skill and knowledge which is ordinarily possessed by physicians or surgeons who devote special attention to the study of the particular disease in which he specializes, and to its diagnosis and treatment, having regard, as I have indicated, to the existing state of scientific knowledge. This is bottomed upon the theory that scientific investigation and research have been extended and prosecuted so persistently and learnedly that a person affected by many forms of disease is of necessity compelled to seek the aid of a specialist in order to secure the results thereof. The local doctor in many instances himself suggests and selects a specialist whose learning and industry have given him a knowledge in the particular line which the general practitioner, in rural communities especially, has neither time nor opportunity to acquire. Being employed because of his peculiar learning and skill in the specialty practiced by him, it follows that his duty to the patient cannot be measured by the average skill of general practitioners. If he possessed no greater skill in the line of his specialty than the average physician there would be no reason for his employment. Possessing such additional skill it becomes his duty to give his patient the benefit of it. The question as to when one becomes a specialist is primarily for his own determination; his extra liability attaches when he holds himself out to the public as a specialist.

3. I have said that a practitioner is required to exercise his best judgment. It follows that one who has exercised his best judgment is not called upon to respond in damages if his treatment is unsuccessful. This rule is an exception in the law of negligence. In the ordinary action for negligence it is no defense to say that a man acted according to his best judgment. For this reason it is very important that we know what is meant by the rule.

It means that a physician or surgeon entitled to practice his profession, possessing the requisite qualifications and applying his skill and judgment with due care, is not ordinarily liable for damages consequent upon an honest mistake, or an error of judgment, in making a diagnosis, or in prescribing treatment, where there is reasonable doubt as to the nature of the physical conditions involved, or as to what should have been done in accordance with recognized authority and good current practice. It means that he is not liable for a mere error of judgment, provided he does what he thinks is best after a careful examination, assuming, of course, that his learning is

of the proper standard, applied with ordinary care. He does not guarantee a good result, but he promises by implication to use the skill and learning of the average practitioner, to exercise reasonable care, and to exert his best judgment in an effort to bring about a good result. It is to be noted also that the exception does not apply to all that a physician or surgeon may do in the practice of his profession. There is often a fundamental difference in malpractice cases between mere errors of judgment and negligence in previously collecting data essential to a proper conclusion, or in consequent conduct in the subsequent selection and use of instrumentalities with which the practitioner may execute his judgment. Where due diligence and skill are employed in ascertaining the essential preliminary information for an opinion as to the method of treatment the formation of the judgment in accordance with appropriate scientific knowledge in a case of reasonable doubt is a protection against liability.

A justification for this exception to the general rule is the elementary principle that, when a man acts according to his best judgment in an emergency, but fails to act judiciously, he is not chargeable with negligence. The act or omission, if faulty, may be called a mistake, but it is not carelessness. Physicians, in the nature of things, are sought for and must act in emergencies, and are, therefore, entitled to have their conclusions judged by a different standard from what they might have adopted had they had time to deliberate, and thus to comprehend the probable consequences of the treatment determined upon. This is especially true in fracture cases.

Again, in the very nature of their employment, practitioners are called upon to exercise their peculiar and individual judgment and skill. The personal equation is a large element in their engagement.

Further, the liability of a medical practitioner must be shaded somewhere to make allowance for the peculiarities of the constitution of the human mind and body with which he deals. It has been well said in an Oregon case:

The surgeon does not deal with inanimate or insensate matter like the stonemason or bricklayer, who can choose his materials and adjust them according to mathematical lines; but he has a suffering human being to treat, a nervous system to tranquilize, and an excited will to regulate and control. Where a surgeon undertakes to treat a fractured limb he has not only to apply the known facts and theoretical knowledge of his science, but he may have to contend with very many powerful and hidden influences, such as want of vital force, habit of life, hereditary disease, the state of the

climate. These or the mental state of his patient may often render the management of a surgical case difficult, doubtful, and dangerous, and may have greater influence in the result than all the surgeon may be able to accomplish, even with the best skill and care.

It is also to be noted that physicians and surgeons deal with a progressive, inductive science. In a noted Minnesota case attention was called, in a discussion of this particular phase of a surgeon's liability, to two historic occasions on which the greatest surgeons in our country met in conference to decide whether or not they should operate upon the person of a president of the United States. Their conclusion was the final human judgment. They were not responsible in law, either human or divine, for the ultimate decree of nature. It was then said in the opinion:

The same tragedy is enacted in a less conspicuous way every day in every part of the country. The same principles of justice apply. Shall it be held that in such cases, where there is a fundamental difference among physicians as to what conclusion their science applied to knowable facts would lead to, then what they with their knowledge, training, and experience are unable to decide, and what, in the nature of human limitations, is not susceptible of certain determination, shall be autocratically adjudged by twelve men in a box, or by one man on the bench, or by a larger number in an appellate court, none of whom is likely to have the fitness and capacity to deal with more than the elements of controversy?

All the court can properly do, if an action for negligence should be brought in such a case, would be to direct a verdict for the physician.

Another reason for giving to the practitioner, in such a suit, the benefit of his best judgment, based upon the requisite skill and diligence, lies in the inherent and inevitable uncertainty of available testimony. The basis of the proof of negligence and of the hypothetical questions to plaintiff's experts is naturally the narrative of the family or friends of the patient. Their testimony must ordinarily be unsatisfactory because of the presence of natural bias, the absence of technical knowledge essential to proper observation, and often the want of opportunity for actual perception.

In the Oregon case which I have mentioned, Judge Upton said:

The physician is liable to have his acts misjudged, his motives suspected, and the truth colored or distorted, even where there are no dishonest intentions on the part of his accusers. And, from the very nature of his duty, he is constantly liable to be called upon to perform the most critical operations in the presence of persons united in interest and sympathy by the ties of family, where he may be the only witness in his behalf.

And Judge Jaggard in the Minnesota case mentioned wittily remarks:

This is not necessarily the greatest of the surgeon's tribulations. He is confronted by other uncertainties in testimony greater than those of the human constitution, however fearfully and wonderfully we may be made or act, and greater than those of physical science, however elusive it may be. He is faced by the eccentricities of medical experts. We have no inclination to share in the prevalent and intemperate denunciation of their unreliability and venality. But, if every verdict mulcting a reputable physician in damages must be sustained, if any of his professional brethren can be induced to swear that, assuming the testimony of the family and friends of the patient to be true, the physician had made a mistake of judgment, or had been guilty of unscientific practice, then the profession would be one which "unmerciful disaster follows fast and follows faster."

The latitude allowed to the judgment of the practitioner, you will note, is limited to those cases where there is doubt as to the nature of the conditions involved, or as to the method of treatment. If the case is such that no physician or practitioner would doubt or hesitate, and but one course of treatment would be upheld by a consensus of opinion of the members of the profession, that course should be followed by the ordinary practitioner, and a deviation therefrom is sufficient to charge him with liability in case injury arises to his patient. That is, the following of any other course of treatment may be evidence of the want of ordinary knowledge or skill, or care, or attention, or exercise of his best judgment. In determining his course the physician is bound by what is universally settled in the profession, and not by what some writers and practical surgeons recommend. It is not permissible to try experiments with patients to their injury. The only departure permitted is when the character of the injury is such that the patient cannot endure the most approved method of treatment recognized in such cases. So it has been held that, although the ordinary practice in case of a fracture of both bones of the leg would be to extend the leg to its original length and then use appliances to keep it there, yet if the character of the injury and condition of the patient are such that he cannot endure extension and counter-extension, a failure to resort to such appliances does not show want of skill or negligence. Of course, if the case is a new one, or one concerning which there is no established practice, the patient must trust to the skill and experience of the physician called.

4. In passing upon the skill and judgment of a surgeon regard must be had to the recognized rules or general doctrines of his particular school of practice, and not to those of other schools.

This proposition does not exclude the duty previously mentioned, of keeping pace with the progress of professional knowledge, ideas, and discoveries to such extent as may be reasonably expected of a faithful, conscientious, and competent practitioner of whatever school. It is said that, when a patient selects any one of the many schools of treatment and healing to serve him, he thereby accepts and adopts the kind of treatment common to that school or class, and the care, skill, and diligence with which he is treated, when questioned in a court of justice, should be tested by the evidence of those who are trained or skilled in that school or class. This rule has been applied to almost every conceivable class of practitioners, including osteopaths, magnetic healers, and Christian Science healers, although the contrary has also been held as to the latter. Clairvoyancy is not recognized as a school.

5. Further, in the absence of a special contract to that effect a surgeon does not warrant or insure that his treatment will be successful, or even beneficial.

Want of success in itself is not evidence of negligence. The practitioner's contract in treating a fractured limb is not to restore it to its natural condition of perfection, but to use that degree of diligence and skill to which your attention has been directed. Neither is his obligation altered in any way by the character of the injury he treats. He is not required to exercise care and skill proportionate to the character of the injury, and he is not liable if he does not treat a severe injury with such skill as its severity reasonably demands; provided, of course, his treatment and care conform to the general requirements. And what is true as to the treatment is true as to the determination of the nature of the injury and the condition with which the practitioner is called upon to deal.

The foregoing discussion will naturally suggest the acts or omissions which constitute negligence, or, what is its more common designation, malpractice. And as a preliminary to a discussion of these it must be made plain that there can be no recovery against a practitioner for malpractice if the patient suffered no injury therefrom, so that, even if there is an improper diagnosis or improper treatment, or both, the patient is without remedy if he fully recovers. Having in mind, then, the general principles which I have discussed, I wish to enumerate, without discussion, the acts which may or may not constitute malpractice where injury results to a patient.

ACTS OR OMISSIONS CONSTITUTING MALPRACTICE

1. A physician is not bound to render professional services to everyone who applies, and he is therefore not liable for arbitrarily refusing to respond to a call, although he is the only physician available.

2. Failure to discover the nature of an injury is actionable, if there is reasonable opportunity for examination and its nature can be discovered by the exercise of ordinary care and diligence. It has been held that, if a physician, who by reasonable care ought to discover that an injury will not yield to the usual treatment and that he cannot benefit the patient, fails to make such discovery and advise the patient thereof, he is guilty of negligence, although I have doubts whether the courts generally would approve so drastic a rule.

3. A wrong diagnosis, if followed by improper treatment, gives a right of action, assuming, of course, that the patient suffers injury therefrom. There is no liability on the part of the general practitioner for making a wrong diagnosis of a very rare case which can be detected only by a skilled expert. This I shall hereinafter illustrate with specific cases.

4. As has already been indicated, failure to follow the established practice, to the injury of a patient, is ground for liability, except where the character of the injury is such that the patient cannot endure the most approved method of treatment in such case.

5. Abandonment or neglect of a case, where voluntary and unwarranted, resulting in increased pain and suffering on the part of the patient, renders the practitioner liable in damages. He is not chargeable with neglect because of intervals elapsing between his visits where the injury requires no attention during the intervals, but is negligent where attention is required. If he temporarily leaves his practice, neglect cannot be imputed to him if he makes provision for the attendance of a competent physician and notifies his patient as to his leaving and indicates who will attend in his stead. Leaving one in a critical condition, however, without reason or sufficient notice so as to enable the procurement of another attendant, is a dereliction of duty.

6. Although a surgeon may have exercised a proper degree of skill and care in his treatment of a broken limb, it is his duty to give his patient all necessary and proper instructions as to what care and attention the patient should give the limb in the absence of the physician and the

caution to be observed in its use before it is entirely healed; and for failure to discharge his duty in this respect he may be liable in damages.

7. As already indicated, a physician possessing the requisite qualifications and applying his skill and judgment with due care, is not ordinarily liable for damages consequent upon an honest mistake, or an error of judgment in making a diagnosis, or in his method of treatment, where there is reasonable doubt as to the nature of the physical conditions involved, or as to what should have been done in accordance with recognized authority. There is a fundamental difference, however, in malpractice cases between mere errors of judgment and negligence in previously collecting data essential to a proper conclusion. If a physician omits to inform himself as to the facts and circumstances and injury resulting therefrom, he is liable, however careful he may have been in reaching a conclusion upon the assumed facts.

8. He is exonerated from liability where the patient is guilty of contributory negligence. This is one of the common defenses in malpractice suits, and, while I cannot pause to enter into a lengthy discussion, I shall state, briefly, the aspects of the subject which govern in a determination of liability. It is obviously the duty of a patient to co-operate with his physician, and to conform to the necessary prescriptions and treatment and to follow all reasonable instructions given. Failure in this regard will relieve from liability, subject, however, to the limitations I have mentioned. These aspects are, I believe, a fair statement of the law:

a. If it appears that there was no breach of duty on the part of the surgeon and that the injury was due entirely to the patient's own negligence and failure to follow instructions, or to such negligence or failure on the part of those whose negligence is chargeable to him, there can be no recovery at all.

b. It may appear that while there was a breach of duty on the part of the surgeon, yet that no substantial injury would have resulted therefrom but for the patient's own negligence, or that of a third person whose negligence is chargeable to him. In such case the patient's negligence is one of the causes which proximately contributes to the injury and does not merely affect its extent. In such cases the negligence of the patient, though slight, as compared with that of the surgeon, will preclude a recovery altogether, and not merely mitigate the damages.

c. It may appear that there was a breach of duty on the part of the surgeon which, even in the absence of negligence on the part of the patient, would have caused some injury, or that the injury was aggravated by the negligence of the patient. This is equivalent to a case where an accident results in an injury caused entirely by the defendant and where it was subsequently aggravated by the plaintiff. In such case, if it is possible to separate the consequences of the negligence of one from that of the other, the patient's negligence does not bar recovery altogether, but merely mitigates the damages, so that the surgeon is liable for the injury resulting from his own breach while relieved from that resulting from the patient's own fault.

9. A surgeon is responsible for an injury done to a patient by want of the proper skill and care of his assistant. He is not ordinarily liable for the negligence of hospital nurses or attendants over whom he does not have direct supervision. However, in this state our court has held that a surgeon who is the owner of a private hospital run by him for profit in connection with the practice of medicine and surgery, is liable for the negligent acts of a nurse employed therein. Of course, partners in the practice of medicine are all liable for an injury to a patient resulting from the negligence of any one of the partners within the scope of the partnership business.

This discussion suggests, I believe, a sufficient number of the acts or omissions which may constitute ground for liability. Any breach of duty, —that is, any failure to measure up to the standard of the requirements which I first discussed, —resulting in injury to the patient, is ground for liability in the absence of contributory negligence barring recovery.

I have engaged in this much of the discussion without much use of illustrative material.

While it is possible that I could have presented the principles with greater clearness had each been illustrated with a statement of the facts and conclusions in a specific case, it has seemed best to group those decisions to which I desire to call your attention for the purpose of illustrating and making more clear the principles I have laid down. I, therefore, direct your attention to a few of such cases.

ILLUSTRATIVE CASES

In an Iowa case, the plaintiff fell so that the clavicle was dislocated from the shoulder-blade. The physician called declared it a case of fracture

of the clavicle rather than a dislocation. It appeared, however, that the dislocation was perfectly reduced, and that the dressing and treatment used were such as reasonable care and skill exacted for the cure of a dislocated clavicle. Although at the time of the trial the bone was an inch inward and backward from its bed, it was held that under these circumstances the defendant was not liable, regardless of his error in the diagnosis, as he had nothing to do with the case after the first dressing was applied. In other words, the treatment being right for the actual injury the diagnosis became immaterial.

So it has been held that a physician is not negligent because he is unable to discover a dislocation. If it appears that he gave the patient careful attention, and made more than one thorough examination, and called in another physician for consultation, he is absolved from liability.

But a physician is answerable in damages for failing to discover a dislocation of the shoulder and fracture of an arm when he had reasonable opportunity to make an examination and the dislocation and fracture should have been ascertained by the exercise of ordinary care.

Again, a physician is guilty of negligence where he omits to reduce a swelling and, by reason thereof, fails to discover that the real nature of an injury is a broken patella instead of a rupture of the ligaments.

In a Kentucky case the plaintiff was thrown to the ground in a runaway, so that his humerus was broken in one or more places and the head of the humerus was wrenched from the glenoid cavity. The defendant was called, but failed to discover the dislocation, and, of course, did not treat it. In consequence, the muscles of the arm became atrophied and the shoulder-joint stiffened so that the arm was practically useless. The discovery was not made for some months, so that it could not be remedied. The claim was made that the result was as good as is usually obtained in like cases. But the court said that many cases of injury or illness are recovered from without medical attention, while many others of the same kind do not recover although, apparently, the best medical attention is given. "Then it is equally well known that two or more cases of apparent similarity, treated by the same treatment, and indeed by the same physician, may, and often do, have directly opposite results as to recovery." The court says:

We think that, when a physician undertakes to give his attention, care, and skill to a given case of injury or disease, the patient is entitled to the chance for the bet-

ter results that are supposed to come from such treatment and are accorded by the science of his profession to a proper treatment. That the patient might have died in spite of the treatment, or that "ordinarily" they did die in such cases, is no excuse to the physician who neglects to give his patient the benefit of the chance involved in a proper treatment of his case. . . . In this case the patient was entitled to an ordinarily careful and thorough examination of his injuries, such as the circumstances attending their infliction, the condition of the patient, and the surgeon's opportunities for proper examination, suggested and allowed. If the dislocation was discoverable by such examination and if the physician felt that because of lack of appliances, or lack of experience, he was unable to treat any peculiar feature of the injury, it was at least the right of the injured man to be apprised of his condition, that he might call in more skilled attention if he desired.

Fractures of the neck of the femur have given rise to a considerable line of cases. The difficulty of diagnosing a case of this kind has been recognized by the courts, and, in more than one instance, has served the surgeon well in his defense. In an Oklahoma case, the surgeon was absolved from liability for failure to diagnose a fracture of the neck of the femur, it being shown that he was a reputable surgeon, that he possessed the ordinary skill and ability required, that he took the precaution of calling in an assistant of perhaps even greater skill and their examination was very thorough, and that all precautions and appliances at their command were used, it appearing from the evidence that a fracture of the neck of the femur is sometimes impossible to detect and distinguish from a dislocation.

Again, it was held that a physician was not liable for failing to diagnose correctly a dislocation of the hip-joint, where it appeared that he was a skillful surgeon in good repute, that he gave attention to the case and called in to aid him two other competent surgeons, and that the testimony of all reputable physicians called agreed that the injury was such that it was very difficult and sometimes impossible to detect its character.

The plaintiff, in a similar case in Colorado, recovered damages for her injury. The plaintiff injured her right hip, and called the defendant to treat the injury. Upon his examination he announced that she had only sprained and severely bruised it, when, as a matter of fact, she had sustained a fracture of the neck of the femur with a displacement of the outer fragment, which eventually caused a shortening of the limb from two to three inches. In sustaining the verdict of the lower court, the supreme court said that a surgeon is required to restore an injured limb only to that degree of perfection which would result

from the exercise of that degree of skill in treating the injury which is ordinarily possessed by members of the profession. A surgeon is not responsible for want of success unless it is the result of a failure to exercise ordinary care. Nor is he responsible for a mistake of judgment if he possesses the ordinary skill, and uses reasonable care in exercising it. The fact that an injured limb is defective after the patient has recovered, is proper to consider in an action for malpractice, although it is not *prima facie* evidence of negligence of the surgeon treating it. That is, the mere fact that an injured limb has imperfectly healed does not of itself establish that the surgeon treating it was guilty of negligence, but in this case the defendant, because of improper diagnosis, treated for a bruise rather than a fracture, and from the evidence in the case it was held that the defendant should have found that it was a fracture. It is apparent in this case that the difficulty of the diagnosis of a fractured hip-bone was not brought before the court, and it was the turning-point in the case.

Another phase of liability is brought out in a case where there was a fracture of about the lower third of the right femur. While the defendant was charged with a number of negligent acts it is sufficient that he was held accountable for the use of unnecessary force by an assistant selected by him in reducing the fracture, whereby a ligament of the knee was ruptured so that permanent injury resulted.

An Iowa case involves the question of judgment. The plaintiff suffered two compound fractures of his left lower jaw. The flesh wounds were in the mouth, and the segment of the jaw between the two fractures had been drawn out of position by the contraction of the muscles. Defendant, who was called to treat the case, constructed an interdental splint. There was an infection which caused some complications, but eventually a union resulted, and, while the place of fracture was not readily discoverable by experts, the alignment was more or less imperfect. It was the claim of the plaintiff that there was another surgical method known to the profession which should have been adopted by the defendant, this method consisting of drilling holes in the jaw in the ends of the broken segments, and of drawing and holding the parts together with the use of a silver wire. It followed, however, that even the experts testifying for the plaintiff would hardly have adopted a different course. The court says: "All experts agree that very difficult

cases present a zone wherein the best method becomes largely a question of judgment of the attending surgeon under the apparent circumstances of each particular case." That the appliance was painful or inconvenient, that infection resulted, and that the plaintiff's life was in great peril, were all matters incident to the natural results of the original injury. The best of surgical treatments might not be able to avoid them. Of themselves they are clearly insufficient to prove negligence of the defendant. For this reason the defendant was absolved from liability.

There is a Minnesota case which shows something of the part which the *x*-ray may be called upon to play in this class of cases. The plaintiff sustained a fracture of the leg between the knee and the ankle. The defendants, who were partners, reduced the fracture, and put the leg into a plaster cast, which was allowed to remain for eleven days, when it was removed and a new one put on. Soon after this the plaintiff observed that his foot turned outward. Although the attention of one of the defendants was called to this condition it continued to exist during his eleven weeks' stay at the hospital, and still existed at the time of trial. The cause of this eversion was imperfect approximation of the fractured ends of the bone. The evidence tended to show that the failure to get a straight union was due to the omission of the defendants to apply an extension weight to the injured limb. Negligence was further claimed because of their failure to use a fracture-box, or to take an *x*-ray photograph for the purpose of diagnosis. At any rate there was a poor result. The plaintiff's witnesses, reputable surgeons, stated that in their judgment the treatment was improper and not good surgery. That a fracture-box should have been employed to hold the limb in proper position, and an extension weight employed to draw down and overcome the muscular contraction. They also criticized the failure to take an *x*-ray photograph to determine whether the approximation of the bones was correct. The court held that this evidence was sufficient to warrant a recovery on behalf of the plaintiff. Although it does not appear to what extent the claim as to the use of the *x*-ray influenced the jury, it was an element in the case.

The use of the *x*-ray was further involved in a case where the plaintiff suffered a severe injury of the ankle, which was diagnosed by defendant as a sprain. The foot was put into splints for three or four days, and then placed on a pillow with a sandbag to support it, and the nurse was

directed to massage and move it as much as the plaintiff could stand. As a result of this treatment the foot remained in such a position that the front part was left at a downward angle from the normal position. About two months after the injury an x-ray picture was taken, which disclosed that there was a slight impacted fracture of the forward part of the astragalus and a rupture of the periosteum on the posterior portion of this bone. A fluid exuded which afterward hardened into a bony substance, and formed a wedge between the articulation of the tibia and the astragalus, thus causing the abnormal position of the foot. The evidence showed, however, that an x-ray picture taken at the time of the injury would not have disclosed the condition with reference to the periosteum or the effusion of the fluid. It did not appear that it was the usual method to take an x-ray picture in such cases, and it appeared that an operation to remove the bony growth could be as well performed then as at any time. Under these circumstances it was held that negligence was not shown.

In another case the plaintiff fell, and fractured the bones of each forearm. The surgeon made an examination with the x-ray, and concluded that only one of the arms was fractured and the other badly sprained. Upon frequent complaint of the plaintiff as to the one treated for a sprain at least three other x-ray examinations were made, but they were all fluoroscopic. It was claimed that the failure to take a photograph constituted negligence for which there was liability, but the court held otherwise. It appeared there that the x-ray was used only as a matter of extreme care.

Only a few months ago a decision was rendered in a notable Iowa case where the defendant failing to use the x-ray was charged with negligence for that reason. There was a simple fracture of the femur, which was promptly reduced. There was great difficulty in caring for the injury, and securing a union. There were several operations, two of them by Dr. Murphy of Chicago, and, after about a year and a half of effort, a union was secured, the leg being about one and one-half inches shorter than the other. All sorts of negligence was claimed, one of the principal grounds of recovery relied upon being the failure to use the x-ray in making the diagnosis and, later, in the course of the treatments, especially during the early stages. It was shown that it is entirely optional with physicians whether they would use the x-ray in such cases in the first in-

stance. And the conclusion was reached that, as the purpose of such use is to make the diagnosis, no negligence is to be inferred from the failure to use it where a proper diagnosis can be made without it. The nature of the fracture having been discovered at the outset an x-ray examination would have added nothing to it, so no liability attached.

In a still more recent case, however, the same court has held that it was proper for the plaintiff to show that x-ray machines were available to the defendant so he could have used one in diagnosing the case, which was a fracture of the humerus in which there was such separation of the broken ends that the musculospiral nerve was drawn in between the pieces. The arm is useless as a result. The evidence showed that a surgeon to be certain that the nerve is not caught should take an x-ray picture, and that failing to use it is a circumstance to be considered in determining whether proper care was exercised.

While it thus appears that it is not yet deemed negligence in itself for a surgeon to fail to use the x-ray in making his diagnosis and in following the course of treatment, there is no doubt that, as the device becomes more common and as surgeons make more frequent use of it in determining the nature of fractures and the treatment which should be used, there will develop the principle that failure to use it, if available, is evidence of negligence in those cases where it appears that by its use a more accurate diagnosis could have been made.

I call your attention to just one more case illustrating a field of liability. The defendant reduced a fracture of the arm in the usual manner. He knew that while the patient was waiting for him to arrive continued applications of cold spring-water were placed on the arm. It was bandaged tightly, and the arm mortified so that amputation became necessary. The defense was contributory negligence in calling the defendant only the once, and the possibility that the mortification was due to an infection from the spring-water. The court refused to relieve the surgeon from the responsibility on these grounds, and said that, even though it were certain that the mortification was caused by the infection rather than the hindered circulation, the defendant, having knowledge of the applications of water, should have used reasonable care and skill to ascertain whether there was infection.

These cases are probably more than sufficient to show the application of the several principles

to which I earlier called your attention. They suggest certain things a surgeon may well keep in mind when called upon to treat such a case. And some of these I merely mention.

CONCLUSIONS

While every practitioner expects to render the best service of which he is capable, it has often been demonstrated that complications will arise even in the simplest cases. There is no punishment for carelessness if all ends well; but, if the results are less than expected, there is likelihood of an action for damages, even where the utmost caution has been exercised. While contributory negligence is frequently a help in time of trouble it is not safe to rely upon it, for, when such an issue is raised, the patient usually has the advantage in the matter of furnishing evidence. A surgeon may well approach such a case, therefore, with the assumption that he shall have to defend his diagnosis and treatment at every step of the way. He should exercise such skill as will bear the scrutiny of a court of law.

From the cases I have cited you will note that in a goodly percentage of them there was a mistake in the diagnosis. Every aid available should be invoked to avoid blundering in that behalf. As intimated, I have no doubt we are near the time when the use of the x-ray at this stage will be required to avert the imputation of negligence. Though the exercise of one's best judgment is all that is required, in case of doubt there should be no hesitation to call in associates to make sure at an early stage of the treatment that the condition has been properly determined and the appropriate treatment properly applied.

There should be no stinting in the use of the best appliances available nor in consultation with well-qualified fellow-practitioners. The examinations should be made with sufficient frequency to assure satisfactory progress. Abandonment is dangerous.

Experimentation is to be avoided except in unusual cases.

Instructions to the patient should be specific, and obedience to them insisted upon.

Provision for a friendly witness or two when dealing with a critical situation is desirable. Then the general standing of the surgeon in the profession is an undoubted asset in such litigation. If you will recall, the illustrative cases in which the defendant was absolved from liability were

cases where such precautions were taken that it could not be said that the full duty of the surgeon had not been performed, where he had been so careful that he used the latest appliances, or called in assistants, or showed that the case was one of great difficulty, calling for the exercise of his best judgment only.

While ordinary care is all that is required, there must be extraordinary vigilance to make sure that this degree of care is always reached. If you use such care in the light of the advancing knowledge of the profession you will have little to fear from malpractice suits.

MOBILIZING THE PROFESSION FOR WAR

Until the entire medical profession of the United States, or at least those who are mentally and physically fit and within the age limit, are mobilized within the Medical Reserve Corps of the United States Army,—not until then can the profession give to the Surgeon General that efficiency which he so badly needs in having a large body of medical officers upon whom to draw.

You may never be called; at the same time your joining the Medical Reserve Corps and placing your services at the command of your country, clearly indicates the patriotism which the medical profession, as a whole, should evince and which it must manifest if the war is to be won.

Every doctor must realize that success depends upon a carefully selected and thoroughly trained body of medical officers. By careful selection is meant the placing of a medical officer in a position where he is best fitted for the service, and only by having an immense corps or the entire profession mobilized upon a war basis, can the profession serve the country to the best possible advantage.

This mobilization of the entire profession should come from within the body itself, but every physician coming within the requirements of the service, as to age and physical fitness, should seriously consider this suggestion, and not wait for complete mobilization, but apply at once for a commission in the Medical Reserve Corps of the United States Army.

It is not only for the combatant forces that medical officers are required, but for sanitation, hospital camps, cantonments, and in other departments where the health and life of the forces are dependent upon the medical officer.

There is within the profession a sufficient number of doctors to fully meet the requirements of the Surgeon General's Office,—but to be of service, they must join the Medical Reserve Corps in order to meet the appeal which is now being made for a large and efficient Medical Reserve Corps upon which the Surgeon General may draw as requirements demand.

THE
JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
 H. J. ROWE, M. D. - - - Casselton, N. D.
 H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

MARCH 1, 1918

MINNEAPOLIS CLINIC WEEK

The Minneapolis physicians and surgeons, as well as the men in special lines of medicine, are planning to give a series of clinics in Minneapolis at the various hospitals during the week of April beginning on the eighth and continuing until the twelfth. The program will be announced later, and the further plans of the Clinic will be given in THE JOURNAL-LANCET, in addition to notice by letter. Two or three notices will be sent out, each one of which will be a little farther advanced than the former, in order that the doctors may appreciate the extent and preparations for the week.

These clinics will embrace, as far as possible, all departments in medicine; and the various clinical men will endeavor to show, not only the usual case seen by the men in the country, but the unusual case as well. This will give one an opportunity to see a large number of clinics within a very short time.

The effort will be, not to make the clinic week a burdensome one, but to furnish material enough to interest and entertain the men who are seeking to advance themselves. This is not said to magnify the importance of the clinician, but to show that an attempt will be made to organize and sustain a clinic that will be wholly impersonal in its character.

The program committee will endeavor to systematize the work as much as possible, so that

one may get from hospital to hospital without loss of time, and perhaps with the view of presenting some cases or clinics in symposia. At all events, what the committee wants to do is to give visitors something to entertain and interest them, and to make the clinics sufficiently attractive that they may be worth repeating.

X-RAY MOVING PICTURES FOR MEDICAL INSTRUCTION

The moving-picture scheme for the dissemination of medical information has now hooked up with the x-ray apparatus, and before long it is quite likely that x-ray pictures on moving films will be taken of the heart, lungs, and entire digestive system. The apparatus is not as yet perfected, but one or two New York röntgenologists have succeeded in showing the movements of the great joints, not only to their satisfaction, but to the wonderment of the men who have seen their exposition. It is quite evident that the greater field to be covered by moving-picture films will be one of tremendous wonderment to the medical student of today, and particularly to the physicians who graduated in the antiquity of ten years ago. It is almost impossible to keep up with the tremendous progress that medicine is making in every field. With all these new things for the advancement of education, none seems to be more fruitful of results than the combination which is outlined above. The moving-picture will show a meal undergoing the process of digestion, if it follows the course of the pictures showing the development of flowers, budding of plants, and such other slow-growing and slow-moving development; and these pictures will be run on the screen in much the same way. Films nowadays show the flower in its smallest budding form, then in its growth, development, expansion to full term, and, later, its fall and decline from the parent stock.

The preparation of these films is all done in a very slow, methodical, painstaking manner. The pictures are taken at various intervals; and in the end the films, completely developed, are run through the machine at a high speed so that it looks to one as if the flower grew, blossomed, and declined within one or two minutes. If this same process is applied to the digestive system, with the film run at much lower speed, it will give one a very fair idea of how fast the food moves from the stomach to the small intestine, and what takes place by peristalsis in the intestine. It may also show the discharge of glands

which furnish the secretion to the digestive tract, and even the accumulation in the colon, all of which will be highly scientific, but somewhat startling to men whose ideas are not advancing as rapidly as the film-producers. Then, too, if applied to the chest, a moving-picture of the heart and its contracting ventricles and auricles, and the excursions which the heart undergoes, will be a tremendous help to the diagnostician. This is not among the improbabilities, and it is quite reasonable to assume that such an event will take place within an incredibly short time.

Whether this will ever reach the activities going on in the nervous system is problematic. One can almost see the action of the nervous system in certain individuals, but in others it would be a wonderful achievement to x-ray and photograph some of the morbid ideas, or the ideas which are concealed beneath the domes of many individuals. Some of them who are looked upon as typically ivory in construction will probably demonstrate the slowness of the reception of concepts and precepts and stimuli; while in those who are thoughtful and studious it may demonstrate also the activity of certain cells in the cerebrospinal system.

Films showing the movement of joints is a tremendous step forward; and the anatomist, as well as the surgeon, will soon be able to study the movement of muscles, and the position of ligaments, cartilages, and bony surfaces. It almost looks as if the practice of medicine might be simplified enormously, taking away from many diagnosticians the painstaking and tiresome work which leads them to their final conclusions.

A DIVISION FOR THE REGULATION OF VENEREAL DISEASES CREATED BY THE MINNESOTA STATE BOARD OF HEALTH

Dr. Henry G. Irvine, of Minneapolis, who has recently been in California to organize the bureau of venereal diseases in that state, has been appointed the head of the new division of like kind created by the Minnesota State Board of Health. Dr. Irvine is a man of experience and a specialist in venereal problems. He has been working out a solution, the principles of which he presented to the Minnesota State Medical Association at its meeting in Minneapolis in 1916. His paper was the subject of much commendation at the time, and was endorsed by the section in which it was read.

Minnesota is very fortunate in having such a

man at the head of this new division. The Board has gone a little farther than the boards of most states in the adoption of regulations for the suppression of venereal diseases. They have the endorsement of Surgeon-General Blue of the United States Public Health Service.

The Minnesota Social Hygiene Commission will act in conjunction with the State Board of Health, and will take over some of the duties, or, at least, will furnish facilities for the treatment of many of these patients. The various sections of the state will also be provided with facilities and medicines under a selected board or hospital, so that the clinical department of the University Medical School will not be overcrowded.

Patients will be treated confidentially and reported to the State Board only by number, unless they come under the incorrigible class, when their names and addresses will be recorded with the new Division of the State Board of Health. This identification number is a guarantee of good faith on the part of the authorities and Division head to assure the patient of confidential relations which exist between the physician and patient and between the State Board and the patient. Consequently, no one need feel grieved or hesitant about disclosing the nature of his venereal troubles. Neither should the physician be reluctant about accepting such cases and caring for them throughout the entire time of their illness.

The problem which will confront the Division is the incorrigible class, and those cases will be looked after under the State regulations in order to prevent the spread of the disease as far as possible. The medical men of the state realize the importance of this situation, and also realize that it will not be an easy matter to control it for some time, but anything that will prevent the spread of this disease should be welcomed by the entire profession, even to the quarantine provision.

The necessity of controlling the venereal patient and the advisory or active treatment, particularly where salvarsan is the basis of treatment, is shown by the lax methods of health officers in regard to antitoxin, which is distributed free by the State and placed in the hands of health officers. It has been found that much of the antitoxin has been lost through carelessness; and the same carelessness will probably apply to salvarsan unless it is very carefully guarded and its issue regulated by a state law.

TWO VALUABLE PAPERS

THE EARLY HISTORY OF MEDICINE IN MINNEAPOLIS

The historical sketch of medicine in Minneapolis by Dr. Hamilton, the first part of which appears in this issue of *THE JOURNAL-LANCET*, contains much of only local interest; but it also contains much of general interest, inasmuch as it gives realistic sketches of pioneer physicians,—pioneers in both a new country and a new art, for medicine in the early days of Minnesota was in a state so crude it may well be called *pioneer*, regardless of its hoary age.

Dr. Hamilton has been gathering data for this paper for several years, and the importance of his work is forcibly shown by the difficulties he encountered in his researches, whether for a correct date or for the truth of a legend about some important fact or person. Fortunately, he has been able to consult a few of the men who, though not pioneer physicians, were patients and, later, were associates of such physicians; but their memories are often in conflict with the records found in the newspapers, directories and other printed matter of the day. At times it is not certain that the hasty record is more reliable than the tradition received from the lips of the living; yet the historian may not safely disregard the records. It is probable, however, that the tradition of the humorous incidents of the day, if not reliable in every detail, are truthfully indicative of the spirit of the times.

Dr. Hamilton has done his work well—with the aid, as he admits, of a "recording angel" (Mrs. H.); and they deserve the sincere thanks of the medical profession.

The difficulties encountered by Dr. Hamilton and his associate recorder in gathering reliable data of even the later events in which men now living were participants, suggest that other Northwestern medical societies, local and state, undertake a like work, by the appointment of committees or otherwise, and do so before it becomes too late to obtain information from those who were of or near the pioneer days of medicine in the Northwest.

FRACTURES AND MALPRACTICE SUITS

The able legal paper of Mr. Young, of the North Dakota bar, which is published by request of the medical society before which it was presented, has a value, in our opinion, far beyond the technical legal points it so clearly sets forth for the guidance of medical men, who are often

sorely persecuted by suits for damages, even though they may have rendered invaluable services, and done so without hope of compensation.

It is very clearly implied in Mr. Young's paper, both in his own comments and in the language of the judicial decisions he quotes, what a medical man owes to the patient he treats, and owes it wholly irrespective of the fear of a damage suit following real or alleged malpractice. Every physician owes every patient he undertakes to treat such skill and judgment as a proper and conscientious use of such physician's native abilities (native mental qualities) will enable him to acquire by the conscientious and regularly applied study of medicine, in its broadest sense, from the day he enters a medical school to the day he is put under test, whether by his first, his second, or his *last* patient. The law of the land, statute or common, may excuse much of his incompetency, but the law of righteousness will condone none of it.

Medical journals, medical books, medical clinics, and frequent contact with medical men, whether such contact is with organized groups or occurs in casual meetings between physicians, properly utilized, will raise any physician so far above "the average" of his clan today that the degree of his skill and judgment will put him out of danger of malpractice suits, and gain him the respect, the admiration, and even the love of all to whom he ministers.

Paraphrasing Mr. Young's concluding remark, it is well at all times to use extraordinary care to make sure that you have used ordinary care, and, especially in fracture cases, that you have one or two friendly witnesses to the use of your ordinary care.

A NORTHWESTERN PUBLIC HEALTH LEAGUE

The Northwest and the Twin Cities are gradually becoming known throughout the country as a medical center. The Medical School of the University of Minnesota, the Mayo Clinic, Physicians' Days, Health Weeks, and many other medical activities, have contributed to create this impression. A moving-picture film of the "Health Parade" held in Minneapolis last fall has been flashed on the screen in cities and hamlets throughout the United States.

Another factor which will add further to this impression is the formation of a permanent public-health league, composed of representatives of

all the principal public and private health agencies, such as the State Board of Health, the Health Department, the Anti-Tuberculosis Committee, the Visiting Nurses' Association, and the Infant-Welfare Society. In all, some thirty agencies are represented. This organization is an outgrowth of the "Health and Happiness Committee," which has carried on intensive health weeks for the past two years.

The purpose of the new organization will be to co-ordinate the health activities of the different groups, preventing an overlapping of work. Its chief value, however, will be in the cohesion developed, and in the focusing upon any problem as a unit. This will be particularly effective when any new bit of legislation is needed. In other words, there will be a pooling of effort sufficient to put things over. A further outlet will be in combined educational campaigns.

In the past, each organization has marched forward under its own banner; but now all will march together. The educational value of such a course should be considerable.

The officers of the organization are Dr. H. W. Cook, chairman; F. J. Burns, treasurer; and Mr. Paul L. Benjamin, secretary.

BOOK NOTICES

IMPOTENCY, STERILITY AND ARTIFICIAL IMPREGNATION. By Frank P. Davis, Ph. B., M. D. St. Louis: C. V. Mosby Company, 1917. Price, \$1.25.

This small work is a rather superficial consideration of the subjects mentioned, yet there is so little literature easily accessible on this matter that it may prove quite valuable to those not in close touch with the literature and clinical material which continually present these problems for solution.

—ADAIR.

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS. By George William Norris, A.B., M.D., Assistant Professor of Medicine in the University of Pennsylvania, and Henry R. M. Landis, A.B., M.D., Assistant Professor of Medicine in the University of Pennsylvania. Price, \$7.00 net. Pp. 782, with 413 illustrations. Philadelphia: W. B. Saunders Company, 1917.

This book of 782 pages is well written and profusely illustrated. The authors deal in an exhaustive manner with the principles of physical diagnosis in general, and with the special diagnosis of all diseases of the lungs, heart, thoracic vessels, pleura, pericardium, and diaphragm.

The illustrations consist of photographs from life, photographs of gross, normal, and pathological frozen sections and specimens, radiograms, diagrams, and graphic charts of various kinds. These are all carefully explained and well correlated with the text.

A special chapter is devoted to the electrocardiograph in relation to diseases of the heart. The numerous photographs of the gross pathological specimens, form an intensely interesting and instructive adjunct, seldom seen in a book of this kind. They bring sharply to our attention the connection between physical signs and the underlying pathology in a manner which makes this an indispensable book for the student and a desirable aid to the practitioner and diagnostician.

—WOODWARD.

AN INTRODUCTORY TO THE HISTORY OF MEDICINE, WITH MEDICAL CHRONOLOGY, SUGGESTIONS FOR STUDY AND BIBLIOGRAPHIC DATA. By Fielding H. Garrison, A. B., M. D., Principal Assistant Librarian, Surgeon General's Office, Washington, D. C. Philadelphia: W. B. Saunders Company, 1917.

The merits of this book are too great and too numerous to attempt enumeration. It is a book of more than 900 pages, heavy paper, good clear type, in blue cloth covers, making a very attractive appearance.

The author says it was "written with a definite literary intention, that of stimulating the physician and student to do his own thinking and research by interesting him in the subject at the start." He very modestly declares he has "never regarded his work as anything but a primer or guide-book to a territory of vast dimensions." It is that, and more than that: It is a concise history of medicine, awakening a strong desire to learn from others,—Billings, Baas, Osler, Karl Sudhoff, Flexner, Finlayson, Arnold, Klebs, et al.

Beginning with a chapter on The Ideality of Primitive Medicine and Folk-lore Among Primitive Peoples, there follow chapters on Egyptian Medicine, Oriental Medicine, on Greek Medicine (from before the time of Hippocrates), and Greco-Roman Medicine, extending to 476, A. D. Then come the Byzantine Period, from 476 to 732, the Mohammedan and Jewish Period, 732 to 1096, the Medieval Period, 1096 to 1438, the Renaissance Revival of Learning, and the Reformation, 1453 to 1600. Then four chapters severally devoted to the 17th, 18th, 19th, and 20th centuries.

Not to specify further, it remains to make mention of the appendices, especially the one on "Hints on the Study of Medical History," which is of surpassing interest.

The book is illustrated from ancient art, and notably by pictures of many men eminent in the profession in their day.

—STUART.

NEWS ITEMS

Dr. O. L. Peterson, of Lafayette, will move to Cokato.

Dr. H. L. McKinstry has moved from Clinton to Great Falls.

Dr. H. E. Winchester has moved from Flasher, N. D., to Hazelton, N. D.

The new Methodist hospital at Mitchell, S. D., was dedicated on Feb. 12.

Dr. J. S. Macnic, of Minneapolis, has received a captain's commission in the M. R. C.

Dr. A. S. Nelson, of Adams, N. D., has sold his practice, and will locate in Minneapolis.

The Minnesota State Medical Association will hold its next annual meeting in Duluth on August 28-30.

Dr. Benjamin F. LaRue, who had practiced many years in Appleton, died there last month at an advanced age.

Dr. E. M. Watson, who has been practicing in New Rockford, N. D., for several years, has moved to Hope, N. D.

Lieut. Lynn J. Walker, of Wykoff, has been honorably discharged from the M. R. C. because of physical disability.

Capt. John A. Freeborn, of Fergus Falls, has been honorably discharged from the M. R. C. because of physical disability.

Dr. W. C. Nolte has moved from Dazey, N. D., to Jamestown, N. D., after practicing in the former place for fourteen years.

The South Dakota State Medical Association will hold its next annual meeting at Mitchell in May, probably on the 21st to the 23d.

Dr. D. W. Sullivan, of Britton, S. D., and Dr. C. F. Brooks, of Platte, S. D., have received their commissions as first lieutenants in the M. R. C.

The Minnesota Board of Medical Examiners will hold their spring examination on April 2-4; and the Montana Board will hold theirs on April 2.

Dr. Frank H. Hacking will have charge of the Hopewell Tuberculosis Hospital in Minneapolis during the absence of Dr. W. J. Marcle in France.

Dr. J. J. Gelz, of Richmond, who suffered slight fractures of the skull in a runaway accident, has recovered sufficiently to resume his practice.

Dr. W. F. McCarthy, who has been a member of the staff of the Montana State Hospital at Warm Springs, has returned to Delano to resume his practice in that city.

Drs. L. B. Wilson, W. W. Bissell, and A. U. Des Jardins, of the Mayo Clinic, will go to France to engage in collecting data connected with the medical and sanitary work of the war.

Major J. F. Corbett, of Minneapolis, has been sent from the Rockefeller Institute, N. Y., to Canada to study the Canadian treatment of returning soldiers suffering from peripheral nerve injuries.

Duluth has received a bequest of \$600,000 with which to build a municipal hospital. This handsome gift comes from the widow, who has just died, of the late A. M. Miller, of New York, who formerly lived in Duluth.

Dr. Charles H. Keene, director of hygiene and physical training in the Minneapolis public schools, has been commissioned captain in the M. R. C., and has gone to Ft. Oglethorpe, Ga., for work in the training-camp.

Mr. Paul Benjamin, of Minneapolis, who has been doing exceedingly efficient work as secretary of the Antituberculosis Committee of the Associated Charities, has been appointed assistant secretary of the parent board.

Dr. Samuel A. Brown, of Sioux Falls, S. D., one of the last few pioneer physicians of that state, died last month at the age of 70. Memorial resolutions for Dr. Brown passed by the Sioux Falls District Medical Society appear below.

Dr. J. H. Irvine, of Minneapolis, has returned to California to continue his work with the California Military Welfare Commission as Director of the Bureau of Venereal Diseases. Dr. Irvine has received the cordial thanks of the Surgeon General's Office for his work in this line.

Dr. Mabel S. Ulrich has arranged a course of lectures on social hygiene at the University, to begin March 4. It is for the purpose of training women to go through the state to give lectures to Mothers' Clubs and like organizations. Members of the University Faculty will give lectures. All properly qualified women are invited to join the course.

The Cheyenne Valley Medical Society of North Dakota met last month at Valley City, N. D. The program consisted of clinical cases, and several interesting cases were presented. The election of officers resulted as follows: President, Dr. E. A. LeBien, McHenry; vice-president, Dr. C. E. Spicer, Valley City; secretary-treasurer, Dr. S. A. Zimmerman, Valley City.

The St. Paul Naval Emergency Detachment No. 246, consisting of seven trained nurses in the St. Paul City and County Hospital, left last week for Mare Island, San Francisco. Other nurses are leaving from the hospitals of Minneapolis, Duluth, and other cities of the Northwest.

The damage suit for over thirty thousand dollars brought against Dr. Eduard Boeckmann, of

St. Paul, for alleged burns from an x-ray apparatus, by a Pope County patient, was dismissed by the court. Such verdicts should certainly tend to discourage malpractice suits against highly reputable physicians.

The Nicollet-LeSueur County Medical Society held its annual meeting in St. Peter last month, when the following officers were elected: President, Dr. F. L. Woodworth, LeSueur; vice-president, Dr. Geo. T. Baskett, St. Peter; treasurer, Dr. D. W. McDougal, LeSueur; secretary, Dr. J. E. LeClerc, LeSueur Center.

The Swedish Hospital of Minneapolis celebrated the 20th anniversary of its opening last week, in a delightful but unostentatious manner. Visitors to the hospital and addresses at an evening meeting made up the anniversary exercises. The large number present at each function testified to the good-will of hosts of men and women toward this splendid enterprise. The hospital opened with 25 patients and now has 175. All nationalities and all classes, the rich and the poor, find an unsurpassed hospital home in the Swedish Hospital, long under the efficient management of Supt. G. W. Olson.

President Gillette, of the Minnesota State Medical Association, has appointed the following committees: *Program Committee* (Section on Surgery), Dr. A. MacLaren, St. Paul, Chairman, and Dr. A. W. Ide, Brainerd, Secretary; (Section on Medicine) Dr. H. L. Ulrich, Minneapolis, Chairman, and Dr. T. R. Martin, Duluth, Secretary; *Committee on Necrology*, Dr. A. E. Spalding, Luverne; *Committee on Social Insurance*, Dr. J. W. Andrews, Mankato, Chairman, Dr. J. L. Rothrock, St. Paul, and Dr. L. A. Nippert, Minneapolis; *Committee on Public Policy and Legislation*, Dr. J. B. Brimhall, St. Paul, Chairman, Dr. J. A. Quinn, St. Paul, Secretary, Dr. W. A. Jones, Minneapolis, and the President and Secretary, ex officio; *Member of the National Legislative Council*, Dr. W. L. Beebe, St. Paul.

RECENT ASSIGNMENTS OF NORTHWESTERN MEDICAL OFFICERS

Minnesota—

To Fort Riley, Kas.: Lt. D. Lee, Madison; Capt. G. H. Luedtke, Fairmont; Lt. A. Bernstein, Nashwauk; Lt. B. A. Baird, Lt. H. C. Bumpus, Jr., Lt. C. M. Clark, Lt. S. W. Harrington, and Lt. J. R. McVay, Rochester. To Camp Doniphan, Okla.: Lt. C. B. Drake, St. Paul. To Camp McArthur, Texas: Capt. C. H. Clark, Duluth.

To New York City (Neurological Institute): Major W. A. Dennis, St. Paul.

To Camp Taylor, Texas: Lt. A. F. Ryan, Hibbing. To Chicago (Presbyterian Hospital): Lt. J. J. Donovan, Litchfield.

To Del Rio, Texas: Lt. A. M. Larson, St. Paul.

To Fort Oglethorpe, Ga.: Capt. C. H. Keene, Minneapolis.

To Washington, D. C.: Lt. R. J. Ahlberg, Minneapolis.

To Fairfield, Ohio: Lt. R. L. Johnson and Lt. Henry Odland, Minneapolis.

To Dansville, N. Y.: Capt. J. M. A. Gravelle, St. Paul.

To Fort Sam Houston, Texas: Lt. P. W. Wippermans, Minneapolis.

To Oklahoma City, Okla.: Capt. R. H. Monahan, International Falls.

To Camp Pike, Ark.: Capt. W. G. Carhart, Minneapolis.

To Fort McHenry, Md.: Lt. W. F. Bleifuss, Elgin.

To Camp Beauregard, La.: Lt. A. E. Johann, Minneapolis.

North Dakota—

To Camp Wadsworth, S. C.: Capt. J. P. Aylen, Fargo.

To Fort Riley, Kas.: Capt. G. A. Carpenter, Fargo.

To Rantoul, Ill.: Lt. K. O. Knudsen, Glenburn.

To Fort Oglethorpe, Ga.: Lt. H. B. Wentz, Verona.

Montana—

To Del Rio, Texas: Capt. S. V. Wilkins, Butte.

To New York City (Bellevue): Lt. F. L. Arnold, Billings.

To Camp Dodge, Iowa: Major T. C. Witherspoon, Butte.

South Dakota—

To Fort Riley, Kas.: Lt. O. R. Wright, Huron; Lt. E. H. Boon, Tyndall.

IN MEMORIAM.

SAMUEL AUGUSTINE BROWN

The Seventh District Medical Society, now in regular monthly session, having heard with deep sorrow of the death of our fellow-member, Dr. Samuel Augustine Brown, of Sioux Falls, S. D., offers the following resolutions:

WHEREAS, the late Dr. S. A. Brown was one of our most esteemed members and was always interested in and helpful with counsel towards the advancement of scientific medicine; and

WHEREAS, his professional life throughout has been an example of the highest ideals, both in his relation with his patients and his brother practitioners; and

WHEREAS, having now ended his long and useful life, and answered his Maker's last call, therefore be it

Resolved, that we do now record our sense of deep appreciation of his professional fellowship and the lasting good he has done to the profession and entire community and that we extend our heartfelt sympathy to his bereaved family and that these resolutions be spread upon our minutes and a copy forwarded to his family.

G. G. COTTAM.

E. L. PERKINS.

N. J. NESSA.

GOLDIE E. ZIMMERMAN,
Secretary.

PHYSICIANS ADMITTED TO PRACTICE IN SOUTH DAKOTA AT THE JANU- ARY (1918) EXAMINATION

UPON EXAMINATION

Brookman, Lawrence J., Northwestern, Chi-
cago, 1915, Vermillion, S. D.

Chase, Albert E., Keokuk Med. Col., 1917,
Northville, S. D.

Corson, Oliver E., P. & S., St. Louis, 1915,
Hecla, S. D.

Hall, Charles H., Hahnemann Med. Col., 1876,
Huron, S. D.

Herman, Lester R., Northwestern, Chicago,
1915, Conde, S. D.

Sornsen, Antone A., Keokuk Med. Col., 1894,
Aberdeen, S. D.

Stenberg, Edwin S., Jefferson, 1917.

PHYSICIANS ADMITTED TO PRACTICE IN NORTH DAKOTA AT THE JANU- ARY (1918) EXAMINATION

UPON EXAMINATION

Cross, Irving J., Univ. Michigan, 1904, Wah-
peton, N. D.

Darrow, Frank L., Johns Hopkins, 1917, Far-
go, N. D.

Ripperton, Sherman, Keokuk, 1905, Wind-
mere, N. D.

Tompkins, Charles R., Rush, 1917, Oberon,
N. D.

BY RECIPROCITY

Cherry, Walter S., Creighton, 1905, Enderlin,
N. D.

Miller, John P., Baltimore, 1906, Mandan,
N. D.

Plehn, John F., Hamline, 1903, Edgeley, N. D.
Nine candidates applied for license, two failed.

PHYSICIANS LICENSED TO PRACTICE IN MINNESOTA AT THE JANUARY (1918) EXAMINATIONS

UPON EXAMINATION.

Aranson, Jolan M. Northwestern, 1917

Knapp, Frank N. Bowdoin College, 1917

Nedergaard, Niels. U. of Nebraska, 1917

Nugen, Dorcie R. Rush, 1917

BY RECIPROCITY.

Barnes, Elbert M. Northwestern, 1901

Gibbons, James M. Northwestern, 1908

Hickey, Robert E. Marquette, 1910

Hunt, Verne C. Rush, 1913

Leonard, Lawrence J. Creighton, 1916

Lillie, Harold I. U. of Michigan, 1912
Morseman, Leslie Wm. . . . U. of Nebraska, 1906
Pemberton, John de J. . . . U. of Pennsylvania, 1911
Sanders, Audley. Rush, 1911

POSITION AS OFFICE ASSISTANT WANTED

By a young woman who has been assistant for over five years to a surgeon now called to army service. She can do all the work required of an assistant in minor operations, keep books, do correspondence, operate an x-ray machine and develop plates, etc. Address 115, care of this office.

PARTNERSHIP WANTED

Physician of ten years' successful practice desires as-
sociation with physician or surgeon in city of 4,000 or
more where there is opportunity for permanent prac-
tice; American, Protestant, aged 36; Minnesota license;
reciprocity; just completing twelve-month postgraduate
course surgery and urology; proposition must be strictly
ethical and bear investigation; references exchanged.
Address 116, care of this office.

ASSISTANT WANTED

Assistant physician for general practice, Mesaba
Iron Range, Minnesota; \$150 per month for the first
two months, then \$175 and up, to right man for full-
time services. Send full information, photograph,
and references in first letter. Will be thoroughly
investigated. This is a good position for a live-wire.
Address 114, care of this office.

PRACTICE FOR SALE

An unopposed practice of \$4,500 in modern town
of 600. High school, electric lights, sewerage, etc.
Best farming section in Southern Minnesota. Good
roads. Will sell modern residence with office, or
practice only for nominal sum. Good opening, espe-
cially for one able to speak German. Address 112,

PARTNERSHIP OR ASSISTANTSHIP WANTED

A partnership or assistantship with a future is wanted
in the Twin Cities by a man thirty-five years old, with
four years' hospital and six years' successful general
practice; Protestant, a good mixer, and a hard worker.
Will consider an ethical proposition only; available im-
mediately. State full particulars. Address 110, care of
this office.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane
University of Louisiana, thirty-first annual session,
opened Sept. 24, 1917, and closes June 8, 1918. Physi-
cians will find the Polyclinic an excellent means for
posting themselves upon modern progress in all
branches of medicine and surgery, including labora-
tory and cadaveric work. Special attention given to
military matters this session. For further informa-
tion address Charles Chassignac, M. D., Dean,
New Orleans Polyclinic, post office drawer 770, New
Orleans. Tulane also offers highest class education
leading to degrees in medicine, pharmacy, dentistry,
hygiene and tropical medicine.

In the Treatment of

RHEUMATIC and NEURALGIC ILLS

you will obtain substantial aid from the thorough use of

K-Y ANALGESIC

This non-greasy, water-soluble local anodyne will enable you to ease your patient's pain and discomfort, while your internal or systemic medication is combating the cause of his condition.

The advantages, moreover, of relieving the pain of a facial neuralgia, an inflamed joint, or aching lumbar muscles without recourse to coal tar derivatives cannot fail to appeal to medical men.

K-Y ANALGESIC is a safe and effective adjunct that will daily grow more useful to the practitioner as the many opportunities for its effective use are realized.

VAN HORN AND SAWTELL

NEW YORK CITY, U. S. A.
15 and 17 East 40th Street

and

LONDON, ENGLAND
31 and 33 High Holborn

So many cases of

Pruritus, Chafings, and Irritations

are relieved by applying

K-Y Lubricating Jelly

that we feel we owe it to our patrons to direct their attention to the usefulness of this product as a local application, *as well as* for surgical lubrication.

No claim is made that K-Y Lubricating Jelly will act with equal efficiency in every case; but you will secure such excellent results in the majority of instances that we believe you will continue its use as a matter of course.

NO GREASE TO SOIL THE CLOTHING!

Collapsible tubes, 25c. Samples on request.

VAN HORN AND SAWTELL
15-17 East 40th Street, New York City

Hand Disinfection

can be easily and
conveniently accomplished by the
use of

SYNOL SOAP

This efficient liquid soap enables the physician and surgeon to cleanse and disinfect the hands with gratifying freedom from the irritating effects of caustic soaps and antiseptics. It is particularly serviceable to those who have to cleanse the hands many times each day. Invaluable in the office, operating room and sick chamber.

ANTISEPTIC—
CLEANSING—
DEODORANT

Johnson & Johnson

New Brunswick, N. J.

U. S. A.

Minneapolis Clinical Laboratory

Oldest in the Northwest

N. W. Nic. 3690 410 Syndicate Bldg. T. S. 33 117

We make Auto vaccines from discharges
or the blood

Wassermann Test - - - \$5.00

Serum Test for Gonorrhea, \$5.00

Serum Test for Tuberculosis, \$5.00

HENRY L. ULRICH, M.D., Director

Private Maternity Home

For Women before and during
Confinement.

Infants cared for. Physicians and Nurses in
attendance.

Good References Given.

MRS. J. W. MOREY

2014 26th Ave. So.,

MINNEAPOLIS, MINN.

Use Vaccines in Acute Infections

The early administration of Sherman's Bacterial Vaccines will reduce the average course of acute infections like Pneumonia, Broncho-pneumonia, Sepsis, Erysipelas, Mastoiditis, Rheumatic Fever, Colds, Bronchitis, etc., to less than one-third the usual course of such infectious diseases, with a proportionate reduction of the mortality rate.

Sherman's Bacterial Vaccines are prepared in our specially constructed Laboratories, devoted exclusively to the manufacture of these preparations and are marketed in standardized suspensions.

Write for Literature.

MANUFACTURER
OF
BACTERIAL VACCINES

G. H. SHERMAN, M.D.
Detroit, Mich.
U.S.A.

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY
AND PROMPTNESS ARE OUR
CHIEF AIMS. Send to our nearest
laboratory for fee list and containers
with instructions for collecting all
specimens. These containers will be
sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses
of tissues removed at operation should be part
of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and
anaerobically and isolate the offending organ-
isms. Pipettes for collecting material for auto-
genous vaccines sent upon request.

Wassermann Test, Blood or
Spinal Fluid \$5.00

We do the classical test. Any of the various
modifications will be made upon request without
additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories
(Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

PUBLISHER'S DEPARTMENT

THE SPENCER SURGICAL CORSETS AND SUPPORTERS

The value of a perfectly fitting corset, where abdominal support is needed, is both a medical and surgical necessity; and it is obtainable only—absolutely only—through the combined skill of the medical man in pointing out what is needed—what end is to be obtained—and an expert fitter supplemented by expert workmen to execute orders. The Spencer corset is the product of such action, i. e., of the experience of medical men, expert fitters, and expert workmen—and common sense says there is no other way to obtain success in this line.

The Spencer corsets and supporters are unsurpassed in efficiency, if indeed not unequalled, by any other like appliance on the market. This corset is either back- or front-lacing, and is supplemented by a further support for the back or the abdomen, which is a part of the corset, and is capable of more complete adjustment by tightening-straps passing through the corset with suitable buckles. By a like arrangement adjustable hernial pads are used with the corset, and give results often unobtainable with a truss of any kind.

The Spencer corsets, both surgical and commercial, are now obtainable in Minneapolis at the Glaze Corset Shop, 236 La Salle Building (cor. of Seventh St. and Marquette Ave.). Mrs. Glaze has had years of experience in this work, and she or a competent assistant will be glad to call upon any physician in the city to exhibit the corset or assist in taking measurements in difficult cases. Illustrated pamphlets will be sent to any address upon application. Absolute satisfaction is guaranteed in every case.

BETHESDA HOSPITAL, ST. PAUL

Among the larger hospitals of the Twin Cities, Bethesda Hospital of St. Paul has made a record that is helpful to both the public and the profession. It is conducted by the Swedish Lutheran Church, and its aim is to meet those needs of the public that are not met, on the one hand, by the purely charitable city or state hospital, nor, on the other, by the private hospital the cost of whose conduct imposes very high rates upon its patrons. But it is not a hospital that tends to pauperize its patients by giving them what they can, and should want to, pay for, especially when furnished at the moderate price made possible by the philanthropic efforts of its founders and managers.

The church not only builds the hospital mainly by its own free-will offering, but it relieves it of a large overhead expense, in the form of interest and other charges, which are inseparable from the private hospital. It also gives the hospital its "atmosphere," which robs hospital life of most of its disagreeable features, real or imagined.

The physicians and surgeons connected with Bethesda are men of excellent repute, and the house corps are men and women of high character.

ST. JAMES HOSPITAL AND SANATORIUM

St. James, Minnesota, is a village of somewhat over two thousand people, but it supports a hospital-sanatorium that is much larger and better equipped than many like institutions in cities of two or three times the size of St. James. This is due, in large measure, to the management of the St. James institution, which is conducted in a manner to show the people that their interests are not subordinated to private interests.

Hospitals and sanatoriums are needed everywhere, and the public will support them with the right kind of men back of them, who will give the right kind of service at the right prices,—not cheap prices, always, but at prices commensurate with the services rendered.

The physicians in the territory of which St. James is the center have been loyal to their hospital; and the lesson is a valuable one, well worth learning.

VACCINES IN ACUTE INFECTIONS

Dr. G. H. Sherman, of Detroit, Mich., is now manufacturing the various vaccines which the medical profession recognizes as effective in the early stages of many infectious diseases, such as pneumonia, bronchopneumonia, sepsis, erysipelas, etc. Of course all physicians know that some of these vaccines are used as routine practice by our army surgeons.

Dr. Sherman is the manufacturer of these vaccines, and he is doing much work in the investigation of the results obtained, and is the author of pamphlets and books in this line that have gained the recognition of the medical profession. Dr. Sherman will direct any one seeking information along this line to the latest literature on the subject, and will supply much of it free of cost.

For any information along the above line, address Dr. C. H. Sherman, Detroit, Mich.

SOME VAN HORN AND SAWTELL SPECIALTIES

The K-Y Analgesic is a non-greasy, soluble-in-water anodyne that gives temporary comfort to patients suffering from the severe pain that accompanies facial neuralgia, inflamed joints, rheumatic lumbar muscles, etc.; and its application both relieves the patient and renders more effective the physician's efforts to find and remove the cause of the trouble. It may be safely recommended in a large number of pain-producing conditions or diseases, and is of course for only external application.

Their K-Y Lubricating Jelly is also for external application to overcome obstinate chafings and irritations; and it is much used for surgical lubrication.

It will not soil the clothing as do all greasy preparations, and it is put up in collapsible tubes for convenience.

Interol is a lubricant for internal application. Its action is purely mechanical, and its office is to soften the hardened feces, while lubricating the parts of the same, thus aiding them to pass through the bowel without discomfort to the patient or bad effect upon the intestinal tract. Its use enables nature to restore the natural condition that has been upset, not alone by indigestion, but by the use of cathartics, especially when too drastic or too long continued.

The preparations are strictly ethical, and their use is a daily routine with many physicians.

STANOLIND LIQUID PARAFFIN IN THE TREATMENT OF HEMORRHOIDS

There are few conditions of the human body at once so common and so distressing as hemorrhoids, and, generally speaking, they go on to operation only after causing years of intense suffering to their victims. Moreover, they sometimes become inoperable, leaving the patient in a desperate condition. Then, there is their possible relation to cancer to be considered.

Relief, in the operable or in the inoperable stage, is often gained by treatment aimed at the local condition that produces or aggravates the hemorrhoids. This treatment is lubrication of feces by the administration of a liquid lubricant, such as Stanolind Liquid Paraffin, one of the products of the Standard Oil Company, carrying this great company's guarantee of scientific accuracy in the product's preparation and also its guarantee that the remedy has passed the experimental stage in administration and use; in short that medical men of the highest character have scientifically tested the product's efficiency, and found it to possess the values in medication claimed for it.

A trial quantity, with an information booklet, will be sent free upon request by the Standard Oil Company, 72 West Adams St., Chicago.

THE CHAMBERLAIN SANITARIUM AND HOSPITAL OF CHAMBERLAIN, S. D.

The increase in the number of community hospitals in the Northwest and a uniform increase in the patronage of such hospitals marks, we think, an effort on the part of such hospitals and sanatoria to meet local needs. The Chamberlain institution can care for over 100 patients, and it is well and efficiently equipped in every department. Dr. Crawford, its superintendent, has gained the confidence of the profession in the Missouri River Valley, and he seeks to co-operate with every physician putting cases in his care.

The institution has an extensive hydrotherapeutic and electric equipment, but does not allow either form of treatment to degenerate into a fad.

Dr. Crawford will be pleased to furnish any information concerning the institution that any physician may desire.

THE NEGLECTED THERAPY OF CONVALESCENCE.

The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions as well as the successful management of the more chronic affections are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medicotonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative,

and eliminative functions generally, and to hasten the time when the patient shall be once more "upon his feet." Among all of the general reconstituent and supportive measures in the therapy of convalescence, none is more essential than the reconstruction of a bloodstream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese) in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hematinics in this form, is that digestive disturbance is avoided and constipation is not induced.

THE MINNESOTA SANITARIUM

The small private sanitarium often accomplishes for some patients what the larger institutions cannot. Some nervous and mild mental patients, especially, like the personal attention and homelike environment of the small institution; and when such an institution is directed by the right man the rapid improvement in such cases is often remarkable.

The Minnesota Sanitarium is such an institution, and is under the medical direction of Dr. Leo M. Crafts and his associate, Dr. Julius Johnson, of Minneapolis, with a thoroughly competent superintendent, Mrs. Sophie E. Dybvig.



HEPCO FLOUR

For Diabetics

A palatable, nutritious flour that corrects diabetical ailments. Starchy Indigestion, and other troubles requiring a starch restricted diet. Less than one per cent starch. Rich in Protein and Fat. Strengthening, appetizing, immediately beneficial.

Approval by the American Medical Association, and prescribed by leading physicians.

Try Hepco Dodgers and Grits. Ready to use.

Write for free booklet containing valuable information for diabetics.

Waukesha Health Products Company
131 Grand Avenue, WAUKESHA, WIS.

COLLECTIONS and CREDITS

THE MERCHANTS COLLECTION AGENCY

Incorporated

JOHN H. WOOD, Secretary & Manager

1015-1019 New York Life Bldg., MINNEAPOLIS

offers you a reliable, aggressive, efficient collection service. Advances costs for legal action. Remits promptly. Gives special attention to professional accounts, and merits your patronage.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, MARCH 15, 1918

No. 6

THE POSSIBILITIES OF LOCAL ANESTHESIA IN MAJOR OPERATIONS*

BY GILBERT GEOFFREY COTTA[†], M.D., F.A.C.S.

SIOUX FALLS, SOUTH DAKOTA

The development of local anesthesia, in both the refinement of technic and the amplification of its field of usefulness, has been one of the remarkable things in modern surgery. In view of this fact it is surprising with what conservatism the profession has received this substantial addition to its resources, especially when we consider that, in certain conditions, it occupies a field practically alone.

I refer specifically to that large class of cases in which general anesthesia is capable of producing harm by aggravation of morbid processes already existing, or of creating new complications by reason of these morbid processes being present. Take, for instance, the cases of permanent organic disease brought about by the establishment of chronic foci of infection. How frequently nowadays we find patients, in or past middle life, affected with chronic myocardial degenerations or chronic nephritides, or both—and who shall say that these are good subjects for general anesthesia? It has been my observation that it is exceptional to find a patient suffering, for instance, from chronically infected gall-bladder in whom there is not at least some degree of toxic nephritis as evidenced by albumin and granular casts in the urine, with increased systolic and lowered diastolic blood-pressure. To me these have been an exceptionally worrisome

class of patients, especially when they are attacked by an acute emergent condition requiring major surgical intervention; and the most anxiety-producing feature of all has invariably been the anesthetic and its dangerous, immediate and later effects, for, we must admit, at the present time we are without a general anesthetic that will not occasionally produce bad effects in a sound individual, and may generally be depended upon to aggravate pre-existing diseases in an impaired one. We all know what chloroform will sometimes do to apparently sound heart-muscle, and how frequently disastrous is its effect on the unsound heart-muscle. For this reason most of us have entirely discarded its employment. The bad effect of ether on damaged kidneys and in pulmonary disease is equally well known. The administration of gas-oxygen is for the expert, and for him only; and, I take it, most of us are not so situated as to command the services of an expert. Even then, for some reason, the mortality-rate in gas-oxygen anesthesia remains relatively high.

Faced, then, by these contingencies, I have found myself asking the questions, What, under these circumstances, are the possibilities of local anesthesia? How far can we go with it, and to what extent can it supplant general anesthesia? Is it safe, in the first place, and free from liability to produce untoward after-effects? If so, what

*Read at the semi-annual meeting of the Sioux Valley Medical Association, Sioux City, Iowa, January, 1918.

is the best local anesthetic drug to use, and what is the most satisfactory mode of using it?

In working out the answers to these questions I was able to satisfy myself, independently of other observers, that with local anesthesia—either intradermically or intraspinally, as the indications may point—we can offer surgical relief to a large class of impaired physical risks in whom general anesthesia would be contra-indicated, having in mind especially those suffering from pulmonary, cardiovascular, or renal disease, either singly or combined. Let the following cases illustrate my meaning.

CASES

CASE 1.—Mrs. G. V., aged 58. Large cystic goiter producing pressure-symptoms. Co-existing pulmonary disease. Kidney insufficiency.

Excision of the right lobe of the thyroid under 0.5 per cent novocain locally. Good recovery.

CASE 2.—Mrs. C. S. W., aged 48. Adenoma of the thyroid with beginning hyperthyroidism.

Excision under 0.5 per cent apothesine locally. Good recovery.

CASE 3.—W. E., aged 62. Acute cholecystitis with stones. Jaundiced. Toxic nephritis. Dilated intermittent heart.

Cholecystostomy, and removal of calculi under 0.5 per cent novocain locally. Good recovery.

CASE 4.—W. E. M., aged 67. Acute cholecystitis with stones. Blood-pressure systolic, 170; heart, intermittent and irregular (tobacco addict). Albuminuria, granular and hyaline casts. Sp. gr., 1.018.

Cholecystostomy and removal of eighteen stones, some of which blocked the cystic duct, under 0.5 per cent apothesine locally. Good recovery.

CASE 5.—Mrs. L. T. D., aged 71. Acute suppurative appendicitis with beginning general peritonitis.

Refused operation when first seen with her family physician. Next day decided to have it done, but peritonitis was well established. Quick drainage operation under 0.5 per cent novocain. No untoward effect of operation. Died with all symptoms of general peritonitis some days later. The case is interesting as illustrating an operation on a seriously septic patient in which the anesthetic at least did not add to the danger already present.

CASE 6.—G. G., aged 17. Subacute appendicitis. Two previous operations for right-sided empyema thoracis, apparently secondary to appendix infection. Last empyema operation three weeks before, and lung still collapsed.

Appendix removed under 0.5 per cent apothesine locally. Good recovery.

CASE 7.—F. A. B., aged 24. Injured in a head-on collision between two motorcycles at high speed. Compound fracture of the left femur, and head injury, which brought about right hemiplegia, including right side of face, mental confusion, rising blood-pressure, and loss of sphincter control of bladder.

Craniotomy of the left middle meningeal area, anterior portion, arrest of hemorrhage from latter, evacuation of clots, free removal of bone for decompression purposes under 0.5 per cent apothesine locally. Good recovery.

CASE 8.—E. G., aged 21. Traumatism in the occipital region (struck by stove-poker) semicomatose.

Exploratory operation under 0.5 per cent novocain locally. No skull injury found. Cranium not opened. Good recovery.

CASE 9.—A. V. R., aged 73. Post-influenzal dry gangrene of the left leg. Six weeks before, the patient had influenza, followed two weeks ago by acute nephritis and prostatitis. Gangrene developed three days ago, and there is fairly well developed demarkation line just above the knee.

Amputation at the junction of the middle and lower third of thigh under 5 per cent novocain injected intraspinally. Patient recovered without incident.

CASE 10.—G. W. McM., aged 83. Carcinoma of the prostate with urinary obstruction.

Suprapubic prostatectomy under 5 per cent novocain injected intraspinally. Good recovery.

CASE 11.—A. E., aged 62. Prostatic hypertrophy with accompanying urinary obstruction. Urine shows albumin and granular casts.

Suprapubic prostatectomy under 5 per cent novocain injected intraspinally. Good recovery.

CASE 12.—Mrs. J. M. S., aged 69. Asthmatic. Prolapsus uteri: marked cystocele.

Anterior vaginal celiotomy. Modified Dührssen-Mackenrodt fixation under 0.5 per cent apothesine locally. Good recovery.

CASE 13.—Mrs. H. P., aged 60. Strangulated femoral hernia. Condition poor.

Novocain 0.5 per cent locally. Good recovery.

CASE 14.—T. B., aged 34. Streptococcic infection of the left thigh with extensive sloughing, exposing the muscles of Scarpa's triangle. Condition poor.

Skin-grafting under local novocain 0.5 per cent. Good recovery.

CASE 15.—W. Double oblique hernia: right side, large and unretainable; left side, irreducible. Heart dilated, irregular and intermittent.

Herniotomy under local novocain 0.5 per cent. Good recovery.

The above few cases, cited for their non-suitability for general anesthesia, show the possibilities of local and spinal anesthesia in just that class of cases. Most of the patients, it will be noted, were aged, infirm individuals, each with a serious surgical emergency confronting him, and yet in every instance the operation was devoid of shock and unaccompanied by any complication due to the anesthetic. I plead, therefore, for the wider use of local or spinal anesthesia in these hazardous risks, feeling sure that, with increased familiarity with its administration, it will be found safe and sure, free from the great drawbacks of general anesthesia.

THE VESTIBULAR APPARATUS AND ITS RELATION TO AVIATION

BY WILLIAM R. MURRAY, M. D.
MINNEAPOLIS

Within the membranous labyrinth of the internal ear are two distinct and separately functioning organs, the cochlea and the static labyrinth. Within the cochlea, which is the end-organ of hearing, is distributed the cochlear branch of the auditory nerve. The static labyrinth, which is the sense organ of equilibrium, receives its nerve supply from the vestibular branch of the auditory nerve, and contains the sacculus, the utricle, and the three semicircular canals. The two special sense organs, the cochlea and the static labyrinth, are more or less independent of each other as regards their physiology and pathology; and, while both may be involved and their functions inhibited or suppressed, it frequently happens that the vestibular portion of the eighth nerve may alone become involved, and the hearing remain normal.

It is to Bárány that we are chiefly indebted for our knowledge of the physiology and pathology of the static labyrinth and for our method of testing its integrity. Jones, Fisher, and others in this country have further developed these methods of examination, and have shown that the nerve tracts from the horizontal semicircular canals have a separate pathway in the brain from those of the vertical canals. Hence a stimulus applied to a semicircular canal will determine the integrity, not only of that canal, but also of the pathway leading to the eye muscles and the cortical center in the brain, and examination of each semicircular canal separately will determine the functioning power of the entire vestibular apparatus. The ability of the individual to maintain his equilibrium depends upon his vestibular apparatus, his visual apparatus, and his muscle sense. Deprived of one of these factors in maintaining balance, he is still able to maintain his equilibrium; deprived of two of these factors, serious trouble follows. This is illustrated in the case of the tabetic who has an impaired muscle or arthroclial sense. As long as he has his eyesight and unimpaired vestibular apparatus, he is able to maintain his balance. When he closes his eyes, there follows an imbalance. In the case of the deaf mute who has a destruction of both internal ears, he is able to maintain his balance as long as he has his sight and arthroclial sense; and the blind person is able to maintain his bal-

ance as long as he has a functioning vestibular apparatus, perfect eyesight, and an unimpaired muscle sense. Hence it becomes of the utmost importance that the aviator should possess a perfect vestibular apparatus, perfect eyesight, and an unimpaired muscle sense. The most important of these is a perfectly functioning vestibular apparatus. When the aviator rises from the surface of the earth, his muscle sense is somewhat impaired; and, if he loses temporarily his sense of sight, as he does when flying in the clouds and at great altitudes, he must depend upon his vestibular apparatus to maintain his balance and his power of orientation. It is very probable that some of the unexplained fatal accidents that have occurred have been due to the aviator's impaired ability to maintain his equilibrium, resulting in a loss of control of his machine. Another very essential faculty that the aviator must possess is a perfect binocular and stereoscopic vision. Any impairment of this faculty means inaccuracy in judging the relative distance of objects, and the inability of the aviator to make a safe landing.

Some impairment of the function of one or more of the semicircular canals or of one or more of the tracts leading to the brain centers may be the result of a former attack of measles, scarlet fever, mumps, or other acute infections. In such cases the cochlear portion of the labyrinth may be unimpaired and the subject possess normal hearing. Such an individual may also possess an apparently normal sense of equilibrium as long as he remains upon the surface of the earth, but when he attempts to fly he may find that this impaired function of the vestibular apparatus has added a dangerous element to the already hazardous occupation of flying. It is a well-known fact that the semicircular canals of birds are wonderfully developed, and this is due to the fact that birds, especially birds that fly at great heights, must depend upon their vestibular apparatus almost entirely when flying, as their sight and muscle sense, under those conditions, are of no value.

In making the tests to determine whether the vestibular apparatus is normal, it is necessary to examine each set of canals separately, for it is necessary to determine the integrity of each semicircular canal together with its separate pathway to the brain centers. The method of examining

the vestibular apparatus has been standardized by the U. S. Army, and is carried out by means of the turning-chair, supplemented by the use of the caloric tests in doubtful cases. The reactions elicited by revolving an individual in the turning-chair depend upon the movement of the endolymph within the semicircular canals. This movement of the lymph, set in motion by the turning, stimulates the hair cells within the canals, and this stimulus is conducted along the pathway of that particular set of canals to the eye muscle nuclei and to the cortical brain centers, giving rise to the definite phenomena of nystagmus and vertigo. If these reactions are normal for each set of canals, they indicate normal functioning power of the entire vestibular apparatus, which includes the static labyrinth and nerve tracts to the eye muscles and brain centers.

Nystagmus results from the stimulus passing from the semicircular canals to the eye-muscle nuclei and the eye muscles, and vertigo results from the stimulus passing from the semicircular canals to the cerebellar nuclei and thence to the temporal lobe cortex. The three semicircular canals are placed in three planes at right angles to each other, and each canal, when stimulated, produces a nystagmus corresponding to its own plane, and this nystagmus is increased by turning the eyes in the direction of the rapid movement of the nystagmus. The horizontal canals produce a horizontal nystagmus, the frontal canals produce a rotary nystagmus, and the sagittal canals a vertical nystagmus. Nystagmus due to vestibular irritation is a rhythmic nystagmus, and consists of a slow movement of the eyeballs in one direction followed by a rapid movement in the opposite direction. The direction of the nystagmus is indicated by the direction of the quick movement.

The stimuli usually employed to produce a physiological nystagmus are syringing the ear with cold water, at a temperature of 68° F., and rotating the patient in the turning-chair. In testing a given set of semicircular canals for nystagmus by means of the turning-chair, the particular set of canals under examination must be brought into the horizontal position. In testing the horizontal semicircular canals the head is tilted forward 30 degrees, and fixed in that position by means of a properly tilted head-rest. In this position the horizontal canals are in a horizontal position, and rotating the patient sets in motion the endolymph within those canals, and results in a horizontal nystagmus to the oppo-

site side; that is, when the patient is turned to the right, with the head fixed 30 degrees forward, there occurs a movement of the endolymph in the horizontal canals. During the act of turning to the right the movement of the lymph is toward the left, but on stopping the turning there follows a movement of the lymph to the right, and an after-nystagmus to the left occurs. If the frontal canals are to be tested for nystagmus, the head is tilted forward 120 degrees, to bring the frontal canals into the horizontal position, and the chair is rotated. This is followed by a rotatory nystagmus, the rapid movement of the nystagmus being in the direction in which the chair is turned. If we wish to test the sagittal canals, the head is inclined toward the right or left shoulder, when rotation causes a vertical nystagmus.

In order to standardize the results obtained in testing for nystagmus, it is necessary to revolve the turning-chair a certain number of times in a certain number of seconds. Jones and Fisher have found that the normal duration of the nystagmus from the horizontal semicircular canals is twenty-six seconds when the chair is turned ten times in twenty seconds. In examining the horizontal canals for nystagmus the subject is seated in the turning-chair, with head fixed at 30 degrees forward and eyes closed, and the chair is revolved to the right ten times in twenty seconds. The chair is stopped, the patient immediately opens his eyes and looks straight in front of him at some distant object, and the duration, amplitude, and direction of the nystagmus are recorded. The chair is then turned to the left, and the results similarly noted. In the examination of candidates for the aviation service, a leeway of ten seconds is allowed in the duration of the nystagmus; that is, a nystagmus duration of from sixteen to thirty-six seconds. If nystagmus is absent or of less than sixteen seconds' duration, it indicates a corresponding degree of functional impairment of the semicircular canals or of the nerve tracts leading from those canals to the eye muscles. If the nystagmus duration is more than thirty-six seconds, it indicates a hypersensitive condition of that portion of the vestibular tract that would make that particular individual an undesirable subject for the aviation service.

Nystagmus and vertigo are distinct and separate phenomena, independent of each other, and produced by stimuli passing along different tracts from the semicircular canals to the brain centers. In testing the horizontal set of canals for vertigo,

the head is fixed at 30 degrees forward, the eyes are blindfolded, and the chair is revolved rapidly to the right, ten times in ten seconds, and brought to a stop by means of the stop-pedal. The outstretched finger of the subject is quickly placed upon the finger of the examiner, and he is told to raise his arm straight above the shoulder and bring his finger down upon the examiner's finger. If the horizontal canals are normally functioning, the patient will "past-point" to the right of the examiner's finger. The left arm is quickly tested in the same way, and testing of the right and left arms is continued as long as there is any past-pointing. The patient is then turned to the left; and the right and left arms are similarly tested. The past-pointing is due to the vertigo, and the subject continues to past-point as long as the vertigo lasts. While the chair is being turned, the subject feels that he is turning in the same direction as the turning of the chair; but when the chair is stopped he feels that he is still turning, but in a direction opposite to that of the actual turning of the chair. In his efforts to find the examiner's finger he reaches back and past-points. The past-pointing is in a direction opposite to that of the vertigo, but in the same direction as that in which the chair was turned. The distance to which he past-points to the right or left depends upon the extent of the vertigo, and gradually diminishes, as the vertigo subsides, until the finger is brought down directly upon the finger of the examiner. In testing the vertical semicircular canals and their tracts for vertigo, the head is placed forward 120 degrees, because the turning affects only those canals which are in a horizontal plane. This may be done by means of the "falling test." In this test the patient's head is inclined forward 120 degrees, which brings the frontal canals into a horizontal position. This is done by having him rest his forehead on a suitable support attached to a horizontal bar on the front of the chair. With eyes closed, he is turned five times in ten seconds, and on stopping the chair he sits upright, and, on account of the vertigo induced by the turning, he falls to the right. It is only when he raises his head that there is a tendency to fall. As long as his head is inclined forward and his frontal canals in a horizontal position, he has a sensation of turning in a plane parallel with the floor, and there is no falling. On raising his head to the upright position, the frontal canals are brought into a vertical position, and he immediately feels that he is revolving in a plane at right angles to the floor, and he falls

in the direction in which the chair was turned. The chair is then turned to the left in a similar manner, and falling to the left occurs. These are normal physiological reactions, and failure to obtain them indicates a functional impairment of that part of the vestibular apparatus under examination.)

(Testing the semicircular canals and their tracts for nystagmus and vertigo may be done by means of the caloric tests, as devised by Bárány, and has the advantage of enabling us to test each canal of one labyrinth only, while the turning tests give reactions from both labyrinths at the same time. The nystagmus and vertigo induced by the caloric tests are caused by the movement of the endolymph within the semicircular canal brought about by directing a stream of cold or hot water against the drum membrane. Preference is given to the use of cold water, at a temperature of 68° F., which is directed in a steady stream against the drum membrane.) To obtain the reactions,—nystagmus and vertigo,—by the caloric tests, the canal to be tested must be in a vertical position. In testing the frontal canal the head is inclined forward 30 degrees. A steady stream of cold water, at a temperature 68° F., is directed against the drum-head. The action of the cold water produces a movement downward of the lymph in the canal, and a rotary nystagmus to the opposite side results. If hot water is used, there occurs a movement of the lymph upward, and a rotatory nystagmus to the same side results. The time required to produce the nystagmus, that is, the time which elapses from the beginning of the syringing to the onset of the nystagmus, is noted, and the presence or absence of vertigo. The vertigo may be demonstrated by the past-pointing tests. In the normal individual the time required to produce nystagmus is about forty seconds. Each semicircular canal can be similarly tested by changing the position of the patient's head so as to bring that canal into a vertical position. Usually the stimulus obtained by syringing the ear with cold water is sufficient to enable us to test each semicircular canal for nystagmus and vertigo by quickly changing the position of the patient's head so as to bring each canal into a vertical position and noting the presence of nystagmus and testing the vertigo by the past-pointing.

In the routine examination of aviation candidates only the turning tests are used, except in doubtful cases, when the caloric tests are used to confirm the findings. This examination consists

of the nystagmus tests to determine the direction, amplitude, and duration of the nystagmus; past-pointing tests to determine the vertigo induced by stimulation of horizontal canals; and falling

tests to determine the vertigo obtained by stimulation of the vertical canals. Abnormal reaction as shown by these tests is a cause for rejection.

SYPHILIS IN CHILDHOOD*

BY H. E. MICHELSON, M. D.

Assistant in Syphilology and Dermatology, University of Minnesota

Syphilis in childhood may have its origin in an hereditary transmission from diseased parents, or it may be acquired as any ordinary infection through contagion. One must therefore distinguish between hereditary and acquired syphilis, even when found in a child.

In 1912 there were in the United States approximately 4,000 deaths from syphilis in children under ten years of age. It is safe to assume that these cases are mostly of the inherited type because the association of young children is limited to parents or attendants, and, if the parents are luetic, the child would in all probability have the congenital form of the disease. Lues, per se, is not often the cause of death; the direct cause generally being some disease that might not be fatal if the child's constitution were not undermined by syphilis. Marcus has shown that only about 25 per cent of deaths in luetic infants are due to lues. The majority of the luetic children, if they have no active demonstrable lesions, inherit a weakened constitution, and are susceptible to all of the infectious diseases, especially tuberculosis. J. N. Hyde found 916 deaths during the first year of life in 1,121 syphilitics.

Sources.—Either parent may be the first syphilitic in that family, but, in the light of recent knowledge, it seems fair to presume that both become syphilitic. Syphilis in the child, originating from the father without infecting the mother, depends upon a spermatoc infection of the ovule. Spirochetes in the semen have never been demonstrated by the microscope, but spermatoc fluid has been found infectious for syphilis in rabbits and apes. In these instances florid luetic lesions were present along the genital tract. It is hard to conceive of the active wriggling spirochete being present within the spermatozoa, and it hardly seems possible that the impregnated ovule could develop if spirochetes were developing, at their usual rapid rate, within it. Further-

more, it does not seem possible that a woman harboring a syphilitic embryo loaded with spirochetes would not become infected herself. If practically all the children from women in the florid stages of syphilis are syphilitic, why would not the reverse be true, and, therefore, if the embryo were syphilitic from a paternal source, why would not the woman become infected from her luetic embryo?

Colles' law states that, if a woman who is free from syphilis up to the time of conception, gives birth to a syphilitic child without showing signs of syphilis herself, she is immune to syphilis. This law was formulated before the days of the Wassermann reaction, and so many exceptions have been published since then that the value of the rule has been lost. Fournier said, "The immunity against syphilis is to have it." Therefore Colles' law may be construed to mean that the woman who gives birth to a syphilitic child without showing signs of syphilis herself, is immune only because she has the disease in the latent form.

The results of extensive observations in the foundling asylum at Prague lead Steinert and Flusser to state that all luetic children have luetic mothers, but they could not substantiate the reverse either clinically or serologically, as follows, that all children of luetic mothers are luetic. They also state that luetic women can give birth to luetic children at a time when their syphilis cannot be discovered in any known way. In this connection we might state that it is a well-known fact that the Wassermann reaction is not infallible and that many an adult whom we are positive has syphilis gives a negative Wassermann, and does not show conclusive clinical signs; still he is syphilitic. Why could not this apply to some of the children of a luetic mother?

The general rule, that the degree of transmissibility of syphilis gradually diminishes in proportion to the duration of the disease, remains on the whole correct. In luetic families one sees,

*Read before St. Louis County Medical Society at Duluth, May 19, 1917.

as a rule, first abortions, although the proportion of *all* abortions that are due to syphilis is small. Following abortions we have still-births, then living prematurely born infants, then living syphilitics, and finally well infants. Children who are only slightly diseased are born often apparently well, and do not give evidences of syphilis until sometime during the first three months of life.

The fetal organism is subject to pathological changes caused by the spirocheta pallida during the period of gestation. The parenchymatous organs, especially the liver, are the most often attacked if the contagion is early, while the skin, which does not develop its glandular elements until the later months of intra-uterine life, does not show luetic lesions until shortly before or just after birth.

Elias, in a review of 1,000 cases, found that evidence of syphilis almost invariably appears in the first three months of life, and in 55 per cent of cases appears before the end of the third week.

Symptoms.—Every organ is subject to various pathological changes caused by the activities of the spirochete; therefore the presenting symptoms will be dependent upon the organs affected, or the constitution may be undermined by the virus of syphilis without any predominating symptoms.

The well-known symptoms are the following:

Snuffles, that is, a coryza with its accompanying hoarse cry. This affection begins with the swelling of the nasal mucous membrane; later there is a serosanguinous discharge with crust-formation and subsequent ulceration, sometimes followed by perforation of the septum, and, if the nasal bones are destroyed, the nose will fall down, leaving the characteristic pug- or saddle-nose.

Optic neuritis, interstitial keratitis, and iritis are found with relative frequency. Sudden deafness, due to a specific neuritis of the auditory nerve, is also described. This may be the only symptom of syphilis noted in that individual.

The typical convergent barrel-shaped, notched, upper-central incisors, or Hutchinson teeth, although often described, are by no means a common accompaniment of syphilis.

The glandular system is often involved, a general adenopathy is not rare, and the cubitals are usually palpable. The spleen and liver are often enlarged and hard, due to chronic diffuse interstitial change. Syphilomata of the liver and spleen are rare in congenital lues. Involvement of the urogenital system is also rare.

Radiograms of the long bones of syphilitic infants almost invariably show important lesions. The disease involves the junction of the epiphysis with the diaphysis, with a widening of the zone of the calcification, and is responsible for an easy separation of the epiphysis through the slightest injury. Peripheral gumma beneath the periosteum give rise to the well-known syphilitic nodes on the superficial bones. Dactylitis syphilitica is a manifestation of bone or periosteal involvement.

Mentally the syphilitic child is often behind its mates. Syphilis probably plays an important part in at least some of the cases of congenital idiocy.

Dermatology of Congenital Lues—Syphilitic pemphigus, when present, is a typical lesion. It is a *bullous* eruption, appearing first on the soles and palms, but later may invade other regions of the body. Pemphigus is truly a papulopustular syphilide. The blebs arise from a non-inflammatory skin, and have an infiltrated base. They are filled with a seropurulent or bloody fluid. They do not rupture for some time; after rupture ulceration may take place. Spirochetes have been found repeatedly in the fluid.

Mucous patches may develop about the mouth or anus; and radiating fissures and rhagades are often present, and are pathognomonic if they are definitely linear and not confined to the angles of the mouth. The papular, pustular, and ulcerating syphilides may all be present, and the desquamated, hypertrophied, papular eruptions, or condylomata, are often seen in any region where two opposing skin surfaces rub together, as in the circumanal or genitocrural regions.

The roseola of acquired syphilis is never found in congenital syphilis. A diffuse skin infiltration is described, which is found in the first three months of life. Here the skin is thickened and may show various tints, the weak coffee and cream color (*café-au-lait*) being most often mentioned. A special form of this infiltration is found in specific paronychia, which is accompanied by trophic disturbances of the nails.

The favorite location of the maculopapular syphilides is the forehead and the hairy scalp. The lower extremities, the flexor surfaces of the upper extremities, the neck, chin, and face, and the palms and soles are all common seats of cutaneous manifestations, while the trunk is usually free from eruptions.

The skin lesions of late hereditary syphilis differ in no way from those found in acquired syphilis. The nodular syphilides predominate. The serpiginous arrangement, due to the tenden-

cy of lues to heal from one side and progress from the other, is often present. The nodules are found at the borders of the healthy skin, and the scar-tissue. They are discrete and hard, situated in the healthy skin. The skin covering them may be ham-colored or desquamated, forming the crusted serpiginous ulcerating syphilides, which belong to the most intractable manifestations from a therapeutic standpoint. (My illustration shows such a syphilide before and after two and one-half years of compulsory treatment with mercury and iodides. Salvarsan was refused.)



Fig. 1. Before treatment. Fig. 2. After treatment.

Fig. 1. The patient, a boy six years of age, had a luetic dactylitis present for two years, with no treatment. There was no history of lues in family. The mother and father were well. Wassermanns were not permitted. The ulcerating serpiginous lesion had been present for four months.

Fig. 2. Intravenous treatment was refused. The visiting nurse administered inunctions combined with iodides for two and one-half years. Ammoniated mercury was used locally.

This demonstrates the great resistance that this type of lesion has to treatment.

Serologically.—The frequency of hereditary syphilis from a serological study of 1,000 consecutive new cases in Philadelphia was 3 per cent. The amount of hereditary syphilis in hospital infants and children in four large cities of the United States (New York, St. Louis, San Francisco, Chicago) ranged from 2 to 6 per cent.

The Wassermann reaction is positive in practically 100 per cent of cases in late childhood. Of 161 infants from syphilitic families, studied

by Veeder, of St. Louis, 107 had both clinical symptoms of syphilis and a positive Wassermann. Of these 16 were clinically negative, and gave positive reactions; 5 were clinically positive, but gave negative tests; and thus 33 of the 161 were free from disease.

Noguchi, after collecting the statistics of many workers, states that the luetin is positive in 70 per cent of cases of congenital lues. This test is not used now, nor considered specific by any dermatologist of note.

Treatment.—In the treatment of congenital lues we have, as in the treatment of acquired syphilis, three elements,—arsenic, mercury, and iodine,—each of which has its place and is useful. The Wassermann reaction has taught us, as nothing else has done, the universal inadequacy of treatment in congenital syphilis. Citing E. Welde: "Of 396 infants treated for congenital syphilis in Heubner's service at the Charité Hospital (Berlin), the late results could be determined in 200. Of these, 94 died in the hospital,—10 soon after discharge, 14 later on from contagious diseases,—leaving 82 living children to be examined. Of these, 36 were traced and examined, and only 9 were found free from evidences of syphilis." This is largely due to the indifference on the part of parents and to carelessness on the part of the physician. Three or four years of treatment with arsenic and mercury, using iodine as an adjuvant, are necessary to effect a cure.

Ehrlich's Preparations.—Up to two years of age the neosalvarsan in concentrated solution may be injected directly into the veins of the scalp, which are strikingly dilated in young syphilis, or, may be injected through the fontanelle into the sinus, 0.1 gm. of salvarsan or .015 gm. of neosalvarsan per kilo of body-weight being a safe dose at intervals of three or four weeks. The neosalvarsan had best be used because of the difficulty in keeping a child still long enough to inject salvarsan, which must be more diluted. After two years of age, the drug can be given intravenously in 5 c.c. of freshly distilled water, and may be repeated weekly until all clinical symptoms except the Wassermann reaction have disappeared.

Mercury.—The use of mercury should always be combined with arsenic. Children stand mercury very well. The intramuscular injections are prohibited because of the delicacy of the tissues in children. The inunctions are well borne, especially after one year of age, 1 gm. of the 10 per cent ointment being rubbed in daily. The

ointment may be rubbed into the area, and a flannel binder applied over the area rubbed. This binder is changed only once a week. In children the rubbing must be gentle to avoid irritation. Mercury may also be administered by mouth, van Swieten's solution, gray powder, or the protiodide in acacia powder being employed.

The iodides are not well borne by children. They are unnecessary in early infantile syphilis, and should be used only in late recurrences or where the absorption of a gumma is sought. Here the iodides are used as an aid to the use of mercury, remembering that iodine, per se, is not a spirocheticide given in its therapeutic dose.

Local treatments are necessary for some of the lesions, but do not suffice for a cure, the constitutional treatment being imperative. Where ocular lesions are present a competent oculist should always be consulted.

Syphilitic pregnant women should be energetically treated with arsenic and mercury up to and after confinement.

SUMMARY

In conclusion, I have, in a personal communication from Dr. W. J. Heimann, of New York, his permission to quote verbatim from his admirable article on Congenital Syphilis published in the *New York Medical Journal* for September 23, 1916:

Congenital syphilis is syphilis acquired during intra-uterine life through the placenta, which, after having become infected, plays the part of the primary lesion. From this point the umbilical vein conveys the spirochæta to the fetus, the liver being the first organ involved. Thence the spirochæta are rapidly disseminated throughout the fetus. Here all differences between congenital and acquired syphilis cease to exist. Subject to the month of fetal infection, the infant presents cutaneous and systemic evidences of the disease in its secondary, latent, or tertiary stages, and the tertiary stage may

be protracted for years; or tertiary changes late in adolescent or early in adult life may be the first signs of the congenital infection. Remarkable as such facts may appear, they need cause no astonishment, for in acquired syphilis we see frequently enough examples of freedom from secondary manifestations, the first reappearance of activity occurring twenty years or more after the primary lesion, in the form of tertiary changes. These facts serve only to prove the identity of congenital and acquired syphilis.

In conclusion, one more circumstance must be recorded, and this depends not upon the disease, but upon the age at which the disease is acquired. Congenital syphilis is transmitted to its victim during the most important period of development, namely, before birth, and the struggle to overcome this burden takes place partly before and partly soon after birth. Thus, aside from its actual pathological alterations, the disease may cause all sorts of anomalies of development, physical deformities and dystrophies, and mental backwardness, if not actual imbecility, or even insanity. Aside from these considerations, prenatal syphilis and postnatal syphilis are identical.

BIBLIOGRAPHY

1. Lissner, Hans: The Treatment of Congenital Lues, California State Jour. Med., Dec. 15, p. 469.
2. Kuth, Joseph R.: Early Congenital Bone Lues, Arch. Pediat., April 15, p. 244.
3. Roddy, John A.: Wassermann Reaction in Congenital Syphilis, Arch. Pediat., July 15, p. 522.
4. Haberman, J. V.: Hereditary Syphilis, Jour. Am. Med. Assn., April 3, 15, p. 1150.
5. Leo Wolf, Carl G.: Early Diagnosis of Congenital Syphilis, New York Med. Jour., Jan. 15, p. 14.
6. Elias, Lewis W.: Syphilis in Children, Charlotte Med. Jour., Dec. 14, p. 378.
7. Welde, E.: Die heutige Unzureichende Behandlung der Lues (Abstract), Ther. Monatsh., Sept., 1914.
8. Kern, Hans: Über die Anwendung der Epifase. Neosal. Infektion (Abstract), Berlin klin. Wchnschr., Oct., 1914, p. 1742.
9. Friedjung, J. K.: Physiog. und Theorie der Heredit. Syph. (Abstract), Med. klin., Aug., 1914, p. 1345.
10. Arch. Pediat., Feb. 15 to Dec. 15.
11. Boardman, B. W.: Syph. Heredit. and Congenit., Jour. Cutan. Dis., Aug., 1914.
12. Crocker, H. Radcliffe: Diseases of the Skin.
13. Pfundler: Diseases of Children.
14. Hazen: Diseases of the Skin.
15. DeBuys, L. R.: Lues and the Baby, Am. Jour. Syph., Jan., 1917.
16. Barker, L. R.: The Importance of a Knowledge, etc., Am. Jour. Syph., Jan., 1917.
17. Heimann, W. J.: Congenital Syphilis, New York Med. Jour., Sept. 23, 1916.
18. Wright, Franklin R.: Personal communication.
19. Freeman, Charles D.: Personal communication.

THE DEVELOPMENT OF THE FACULTY OF THE MEDICAL SCHOOL OF THE UNIVERSITY OF MINNESOTA

BY JAMES E. MOORE, M. D.

Professor of Surgery and Chief of the Department in the University of Minnesota

Some time ago President Vincent asked the Administrative Board how men secure positions on the faculty of the Medical School of the University of Minnesota, and the answer was so pleasing to him that the writer thought it might be of interest to medical men generally.

Contrary to a quite general opinion, no such

thing as pull or politics is known in the Medical School. As Chief of the Department of Surgery ever since the faculty was organized upon a departmental basis, the writer can say that, never, except in one instance, to his knowledge, has anyone higher up suggested the appointment of a friend upon the faculty, and that appointment

was not made, because it was easy to demonstrate that the proposed candidate would not fit into the organization. Every nomination made in the University Medical School is so carefully considered by the Administrative Board that the most desirable candidates are certain to be selected.

The Administrative Board of the Medical School is the business organization of the school, and is composed of the Dean and the Secretary of the faculty, *ex officio*, of the heads of departments, and of two members elected by the general faculty from their ranks.

It is a rare exception when an outside man is given an advanced place on the faculty, as we prefer to develop our own men. It is just as important to have trained clinicians as it is to have trained laboratory men. Men untrained as teachers rarely make valuable additions to a faculty, and trained clinicians rarely change their residence except to take charge of a department. In the days of the proprietary medical schools the various men in the community who had secured a large business, so that they had clinical material at their command, combined and made themselves the faculty. Each of these individuals was accustomed to having things his own way with his clientele, and was autocratic in his methods and tendencies, so that the faculties in those days were made up of a collection of autocrats. The consequence was that there was frequent friction, and as an educational body they were not eminently successful. A man may be a good physician or surgeon, or a specialist of any kind in the profession, and be a very poor teacher and a very poor faculty member.

We have gradually developed a method in the University of Minnesota which corresponds to that of successful teaching institutions everywhere,—of selecting young men and educating them for positions on the faculty, so that a very important function of our medical school is to educate medical teachers. We are constantly watching our own graduates and bright, capable men from other institutions who locate in the Twin Cities for possible University recruits. We carefully scan a man's ethical standing and professional attainments; and, when it is thought possible that he may be developed into a good teacher, we offer him a place on the staff of the Out-Patient Department, which is our training-school for future members of the faculty. In times of peace there have been many more applicants than we have had places to fill, but now during the war we are short of help both in the

faculty and in the Out-Patient Department. Of the many called to the Out-Patient service but few are chosen. It is monotonous, time-consuming work; and, unless a man is endowed with the proper educational spirit, he tires of it and drops by the wayside. Those who continue the work acceptably are certain, sooner or later, to secure a place higher up on the staff.

Men first appointed to the Out-Patient positions are appointed as Assistants. They are nominated to the Administrative Board by the chief of the department. This Board has the power of appointing to the position of assistant. Appointment is made at first for only one year. After one year, if the candidate has proven faithful and gives promise of future development, he may be renominated as assistant by the chief of the department for from one to three years, as he may see fit. According to the number of vacancies higher up and to the ability of the assistant after he has served for three years, he may be nominated for promotion to Instructor. This nomination goes first to the Administrative Board, and from them to the Board of Regents, and must have the sanction of the President. The position of instructor is usually made at first for only one year. At the expiration of that time the candidate may be renominated for a term of from one to three years, at the discretion of the chief of the department. Any time after three years' service as instructor a man may be nominated for advancement to the position of assistant Professor. Nominations as Assistant professor are made for from one to three years, and in this, as in all positions below associate professor, unless renomination is made at the expiration of his term of service, a man automatically drops from the staff. After a number of years' service, varying with the desirability of the candidate and the needs of the institution, an assistant professor may be nominated by the chief of the department to the Administrative Board, who in turn nominates him to the President and the Board of Regents, for appointment as Associate Professor, which is a life position.

There are comparatively few professors on the faculty; and these positions are held by chiefs of departments and men of specially high attainments in their line of work. These are life positions, or until the age of sixty-eight, the retiring age of the University.

Chiefs of departments are selected by the Administrative Board from the teaching staff or from the profession at large, and are nominated

by them to the President and Board of Regents for appointment.

Unfortunately, we have as yet no fixed salary schedule; but, on the whole, the University is very generous. To a great extent the old idea still prevails that the medical teacher who does only clinical teaching is not entitled to a salary. An old axiom has been distorted to read, "The laborer is worthy of his hire except when he is a member of the medical profession, when he is expected to render his services gratuitously." No other professional school in the University has a staff of unpaid teachers and professors, and there is no real reason why the medical faculty should have, and the time is not far distant when the laborer will be considered worthy of his hire, even if he is a medical man.

In the days of proprietary schools a position on the faculty was an asset, and sometimes a valuable one, but now it is a liability because it brings a man no business and does consume much time. The only reason, therefore, that we can fill these unsalaried positions is that they have their educational value. A man is always a broader and better practitioner for being a teacher, and is always more fully abreast of the times than he would be were he not a teacher. A man who accepts the career of a medical teacher must necessarily lead a life of financial sacrifice, because he could make more money by devoting his whole time to his practice than he can by being a member of the faculty. But to the man with high ideals, and to the one who wishes to make

the most of the talents given him, no better opportunity for development is afforded than that of a teacher in a high-grade medical school. We are now paying salaries to a number of the members of the staff, some of whom are not above the grade of instructor, because the duties are so exacting in point of time that we find it absolutely necessary to compensate men for their time, in order to keep the places filled. The maximum yearly salary paid in the Medical School averages five thousand dollars; and these salaries are limited to the chiefs of the departments, and are very few in number. All chiefs even do not receive that salary.

Upon the suggestion of President Vincent and of the Rockefeller Educational Board, we are endeavoring to establish a number of new clinical positions. A state institution, for evident reasons, cannot pay ten-thousand-dollar salaries, as they are doing in Johns Hopkins, where they received a large sum of money from the Rockefeller Foundation to try out the idea of full-time clinical professors. We are endeavoring to establish a number of clinical positions among chiefs of departments where the incumbent may be paid the maximum salary of five thousand dollars, and will be required to devote the major portion of his time to the University, and be allowed limited privileges in private practice. We are just in the throes of the development of this plan, and we find it rather difficult because we have no precedent to guide us; in fact, we are making medical history.

THE EARLY HISTORY OF MEDICINE IN MINNEAPOLIS*

By ARTHUR S. HAMILTON, M. D.

MINNEAPOLIS, MINNESOTA

IN THREE PARTS—PART II

HENNEPIN COUNTY MEDICAL SOCIETY

Dr. Dunsmoor, in "Hudson's Half Century of Minneapolis," and the "Tribune City Directory" for 1873-4 are authorities for the statement that the Union Medical Society (the precursor of the Hennepin County Medical Society) of St. Anthony and Minneapolis, was organized in 1855 at the residence of Dr. A. E. Ames, who was elected president, with Dr. Wheelock, secretary. In at least two other places the date of organization of the Society is given as 1856, but if there be any doubt on the subject it would seem to be re-

moved by a statement of Dr. A. E. Ames in the *Northwestern Medical and Surgical Journal* of August, 1870, that the Society was organized June 20, 1855. Neill's History gives the following account of the organization: "The Union Medical Society was organized early in 1856 with Dr. A. E. Ames, president, C. L. Anderson, vice-president, Dr. Wheelock, secretary, and C. W. LeBoutillier, treasurer. Amongst the old members were Drs. A. E. Ames, Anderson, Wheelock, LeBoutillier, Johnson, Leonard, Lowenburg, Ortman, White, and Dibb. On June 7, 1870, the Society reorganized as the Hennepin County Medical Society. The meetings are held

*President's Address before the Hennepin County Medical Society, at its Annual Meeting, January 7, 1918.

the first and third Mondays at places designated before adjournment."

Neill's date is correct for the reorganization, but the change of name to "Hennepin County Medical Society" was made in either March or April, 1869. (See later notes.)

The following account is from Dr. Edwin Phillips' article, already mentioned:

"The Hennepin County Medical Society was organized in 1856, a meeting for this purpose being held at the private residence of Dr. A. E. Ames, which was a small house situated between the old county jail and Ninth Avenue South. The house faced on Fourth Street, but stood far back in the yard so that it was nearer Fifth than Fourth Street. The founders and charter members of this Society were Drs. A. E. Ames, Chas. L. Anderson, Asa E. Johnson, A. Ortmann, John H. Murphy, Wm. H. Leonard, C. W. LeBoutillier, Dr. Sewingburg [Lowenburg?], and Dr. Wheelock.

"Dr. A. E. Ames was elected the Society's first president, and Dr. Charles L. Anderson the first secretary. The Society adopted a program of essays, reports of cases, and discussions, much the same as the Society is working under today. Dr. Asa E. Johnson furnished the first essay read. The methods of carrying on the Society during its primitive years, from 1856 to 1871, a period of fifteen years, were as follows: After the program of reading and discussing the papers was carried out the titles of the papers for the next meeting were announced, thus giving each member one month's time in which to prepare for the discussion of the papers for the next meeting, and the discussions were thorough and general.

"As the Society had no permanent place for meetings they were held in the offices or residences of members. When held at the residence of some member, his wife and daughters usually invited the members after the meeting was adjourned to a luncheon of coffee, cake and sandwiches. * * * Some of the favorite places for holding meetings were at the residences of Dr. Wm. H. Leonard, Fifth Avenue North and Second Street, or Dr. John H. Murphy, on the corner of Sixth Street and University Avenue Southeast.

"During the Civil War the Society discontinued its meetings. In the fall of 1865 it was re-organized with Dr. A. E. Ames as president and Dr. Alf. Lindley as secretary. Dr. Ames went to California in the sixties, and during his

absence Dr. Nathan B. Hill was elected president, and he held the office till Dr. Ames returned home, when he was again elected president and held the office until his death.

"It may be of interest for those here to know that the first president of our Society was a licensed attorney. He was admitted to the bar at the time when Judge Flandrau of St. Paul was filling the office of county judge in Hennepin County.

"The Hon. Eugene Wilson moved to admit Dr. Ames to the bar. The doctor had at that time completed his new house, which is still standing at the corner of Fourth Street and Eighth Avenue South, opposite the old county court house. He decided to christen the new house by giving the legal fraternity a royal banquet in response to the honor conferred on him.

"The late John H. Murphy gave the Society its first banquet, some time in the sixties, in the small house on the corner of Sixth Street and University Avenue Southeast. Notwithstanding the fact that the house was small the banquet was immense, and consisted of an old-fashioned bill of fare from roast turkey and cranberry sauce down to the finest fruits of the season. The doctor having more than an ordinary stock of good common sense and a stock of jokes always on hand made this an event long to be remembered.

* * *

"Since the death of Dr. A. E. Ames, which occurred in 1875 [1874], the following named members of the Society held the office of president during the interval from 1875 to 1885: Drs. Nathan B. Hill, Calvin Goodrich, Alfred Lindley, D. M. Woodling, Charles Simpson, Edwin Phillips, O. J. Evans, Charles Wells, A. H. Salisbury, and J. W. Murray. The other members of the Society, not mentioned elsewhere, between 1865 and 1885, were Drs. C. C. Clark, Winthrop Miller, L. F. Damm, W. A. Hamilton, C. E. Rogers, Wm. Hutchinson, J. W. McDonald, C. Cockburn, — Townsend, H. H. Kimball, Archibald Fairburn, J. J. Linn, Henry Keith, Richard Hill, H. S. Hubbard, Cyrus Smith, Charles S. McCollom, Robert S. McCurdy, J. H. Hammond, H. F. Latz, D. F. Collins, Mary Whetstone, A. S. Whetstone, Columbus Slagel, C. J. Spratt, J. H. Dunn, E. J. Brown, J. T. Moore, T. L. Laliberte, E. N. Sharp, W. A. Jones, and others whose names I cannot recall.

"In closing this report I cannot refrain from speaking particularly of some of the pioneer members who have died since 1871. Dr. A. E.

Ames, the first president, was a rare presiding officer, cool, impartial, and conscientious. Dr. Calvin Goodrich was a smooth and ready debater, and always took an active part in the discussions. Dr. Nathan B. Hill won the esteem of the Society by his thoughtful and argumentative manner in discussing medical topics. Dr. J. W. Murray was a close student, and always ready to take part in the discussions. Dr. Hamilton, although young in the profession, won for himself a high type of professional honor. Dr. John H. Murphy won for himself an honorable reputation as a general surgeon and practitioner. Dr. Winthrop Miller served the Society in a scholarly way by his essays and discussions. Drs. Clark and Salisbury served the Society long and faithfully as secretaries. Dr. L. F. Danim won for himself an honorable position in the Society as a chemical expert. Dr. A. Ortman, one of its charter members, was at all times conscientious, honest, truthful, and labored faithfully to elevate and build up professional character. Dr. D. F. Collins was a fine scholar, and added much to the literary work of the society. These gentlemen have written their last essay and made their last address, and have passed on to a bright and beautiful eternity."

The first mention of the Society found in any of the papers available is in the State Atlas of December 3, 1862, as follows: "The Union Medical Society of St. Anthony and Minneapolis met on the twenty-first ultimo at the office of Dr. Ward in Minneapolis. The following officers were elected: A. E. Ames, Pres.; R. H. Ward, Secy.; A. E. Johnson, Libr.; Drs. Johnson, Ward and Lowenberg, Committee of Medical Ethics; Drs. Leonard, LeBoutillier and Hill, Committee on Publications. Three new committees were appointed as follows: Drs. Ames, LeBoutillier and Johnson, Committee on Epidemic Diseases. Drs. Johnson, Leonard, Ortman and Hill, Committee on Diseases of Respiratory Organs. Drs. Ward, Lindley and Lowenberg, Committee on Chronic Diseases Digestive System."

"On motion it was resolved: That as Drs. Murphy, LeBoutillier and Greeley, members of the society, are engaged in medical services in the Federal Army, they be and are hereby requested to correspond with the Society, furnishing such information in regard to the hygiene of the Army and its Medical and Surgical Practice as might be of interest to the Society. It was also on motion—

"Resolved: That a summary of the proceed-

ings of this meeting be published in the local newspapers and that all physicians engaged in regular practice of medicine be invited to cooperate with us in accomplishing the object of the Society, particularly in establishing a standard of high professional etiquette and in obtaining and disseminating through the profession, information in regard to epidemics, the influence of our climate upon chronic diseases and other similar questions of local interest. By order of R. H. Ward, Secretary of the Society."

Judging from the above and from the item of July 6, 1864, the Society did not wholly discontinue during the war.

It is notable, also, that in all the early records the Committee on Ethics occupied a prominent place in the list of officers, and there was a continuous effort to maintain a high standard, but men were continually being tried for violating the principles of ethics laid down. For example, it is related that on one occasion the Society passed a resolution that no physician, not a graduate of a medical college, could be a member of the local society. The Secretary had been particularly active in securing this piece of legislation which automatically dropped one of the members from the rolls. The member who had been dropped went east and in due course of time returned with a diploma, and then proceeded to investigate the Secretary, who was found to be masquerading under a false diploma and was in turn dropped.

The stealing of patients appears also to have been an all too common procedure, and was as frequently a topic of conversation as is fee-splitting in our day. Considering the high character of the men involved, it may not be invidious to relate the following story as showing the spirit of the times. On one occasion Dr. Phillips, meeting Dr. Ames on the street, said to him: "Hold on, I want to talk to you. You have been stealing my patients, but every time you steal one from me I will steal three from you to get even." Conditions such as this gave rise to the statement that the physicians with the fastest horses always had the most patients.

Hereafter follow all the newspaper notices I have been able to find in regard to the Society. There are wide gaps, some of which may be filled by members or by farther research, but it has required a considerable amount of labor to achieve even this incomplete result. From 1867, when the *Daily Tribune* began publication, it is possible at least to keep track of the annual meetings and election of officers, and the latter are

given too in the directories beginning in 1873 and being continuous except for several years hereafter mentioned.

We specially lack information in regard to the years from 1857 to 1866; yet, however much uncertainty there may be in regard to the other officers, there would seem to be little doubt as to whom the president was in these forgotten years. Dr. Ames was the first presiding officer, and appears to have been a fixture, save only during his absence in California in 1868, until his death, in 1874, when he was succeeded by Dr. Simpson, who was vice-president at that time.

State Atlas, July 6, 1864: "At a meeting of the physicians and surgeons held in Minneapolis at the office of Dr. Hill and Dr. Lindley, July 1, 1864, the following fees were established for the present:

"For a visit in town.....\$2.00
 "For a night visit in town..... 3.00
 "When called into country, per mile.. 1.00"

Evidently inspired by the foregoing, we find the following announcement in the *Tribune* of July 20, 1864: "Dr. J. S. Eliot wishes to return his sincere thanks to his numerous friends for the liberal patronage hitherto bestowed and by his past successes in curing diseases and by physio-medical system of practice he hopes to merit a continuance of the confidence of a generous public.

"The greatly increased price of medicine of all kinds compels the undersigned to advance his fee bill as he *furnishes his own medicines instead of sending to the drug store for them any time he makes a visit or prescription*. For a visit in town and medicine, \$2.50.

"Special attention given to all diseases of the throat and lungs.

"Jacob S. Eliot,

"Botanic Physician, Minneapolis, Minn."

The *Tribune*, in February, 1867, remarks facetiously that lawyers and doctors are getting as numerous here as mud-hens on a summer marsh.

Daily Tribune, June 5, 1867: "The Union Medical Society of Minneapolis and St. Anthony hold their yearly meeting at the office of Dr. A. E. Ames this afternoon at 3 o'clock."

Daily Tribune, June 6, 1867: "The Union Medical Society of St. Anthony and Minneapolis met yesterday afternoon at Dr. Ames' office. The following officers were elected: A. E. Ames, Pres.; N. B. Hill, Secy.; A. H. Lindley, Libr.; Committee on Ethics, Drs. G. S. Scott, A. A. Ames, J. S. Brown. Committee on Publications, Drs. O. J. Evans, Geo. W. Hall, A. Ortman. Resolved that this Society is highly grati-

fied with the progress made in placing our city under proper sanitary regulations." The latter statement may refer to the sanitary committee mentioned in the next paragraph.

Mercer's Directory, 1867: "St. Anthony and Minneapolis Union Medical Society meets on the first Wednesday of each month at 7 p. m. at the office of Dr. Ames, corner Bridge Square and Washington Avenue. Pres., A. E. Ames, M. D.; Secy., N. B. Hill; Libr., A. E. Johnson. Sanitary Committee, A. E. Ames, N. B. Hill, A. H. Lindley."

Daily Tribune, Nov. 28, 1868: "At a meeting of the Union Medical Society held last evening at the office of Drs. Hill and Lindley the following named officers were chosen for the year: Pres., A. E. Ames; Secy., N. B. Hill; Libr., A. H. Lindley. The Society is at present composed of the following named members: Drs. A. E. Ames, G. H. Keith, W. D. Dibb, A. Ortman, N. B. Hill, O. J. Evans, W. F. Hutchinson, J. J. Linn, C. A. McCollum, H. A. DuBois, C. G. Goodrich, H. H. Kimball, C. J. DuBois. The next regular meeting will be held on the first Saturday in December at the office of Dr. W. F. Hutchinson."

Some time in the course of this year, during Dr. Ames' absence in California, Dr. N. B. Hill was made president of the Society, but I could find no record of the occasion in the daily papers.

Daily Tribune, Dec. 4, 1868: "At a meeting of the Union Medical Society last Tuesday it was unanimously agreed that in future all bills should be presented for payment within sixty days after the termination of treatment of a case. Mr. J. C. Hall has been chosen collector for the Society."

As already stated, the Minnesota State Medical Society was organized in 1853, but not more than one meeting was held during the following years up to 1869. In January, 1869, a call was issued to the members of the society and to the profession generally for a meeting to consider the expediency of reviving the old society or of organizing a new one. A meeting¹⁷ was held at the International Hotel in St. Paul, February 1, 1869, with Dr. Potts as presiding officer and Dr. Hand as secretary. After some discussion the old society was declared defunct, and a committee appointed to immediately form a new society. Drs. Wharton, Stewart, Mayo, Kimball, and C. J. Dubois were appointed a committee to nominate officers for the ensuing year. They offered the following report:

"Pres., Sam Willey, St. Paul

¹⁷. Transactions of the Minnesota State Medical Society, 1869.

"V. P., A. E. Ames, Minneapolis

"Wharton, St. Paul

"E. J. Davis, Mankato

"S. B. Sheardown, Stockton

"Censors: J. H. Murphy, St. Paul

"N. B. Hill, Minneapolis

"W. W. Mayo, Rochester

"A. C. Wedge, Albert Lea

"J. C. Rhodes, Stillwater

"Standing Com.: A. C. Bresbine, St. Paul

"E. C. Roger, Carver

"J. E. Finch, Hastings."

Daily Tribune, March 20, 1869: "The regular meeting of the Union Medical Society will be held this evening at the office of Dr. W. A. Hutchinson in Centre Block."

No account of the April meeting has been found.

Daily Tribune, May 16, 1869: "At the annual meeting of the Hennepin County Medical Society the following officers were chosen for the following year: Pres., A. E. Ames; Vice-Pres., N. B. Hill; Secy., W. F. Hutchinson; Lib., O. J. Evans. The following committees were appointed: Ethics—Goodrich, Linn, Ortman. Publications—Lindley, McCollom, Kimball. A special committee was also appointed to assist the Health Officer in the discharge of his duties."

Evidently the change in name of the Society occurred between March 20, 1869, and May 16, 1869.

Daily Tribune, June 12, 1869: "A special meeting of Hennepin County Medical Society to be held this evening at the office of Dr. Hutchinson. All members are requested to be present. W. F. Hutchinson, Secy."

Daily Tribune, Sept. 18, 1869: "In September, 1869, Minneapolis was visited by Sir Henry Holland, the eminent English physician [eminent he certainly was if his experience was as extensive as is indicated in the notes that follow in the *Tribune*]. He was consulted in Napoleon's last illness, attended Mrs. Thrale (Dr. Johnson's friend), was the physician and friend of the poets, Campbell, Moore and Rogers, as well as of Madame D'Arblay, Joanna Baillie, Lord Brougham, Sydney Smith, Macaulay and others. He was present at the deathbed of Channing and knew Madame de Staël, Talleyrand, Byron and Sir Philip Francis."

Daily Tribune, Nov. 20, 1869: "Hennepin County Medical Society will meet this evening at the office of Dr. George A. Keith, Johnston's Block."

Daily Tribune, Jan. 23, 1870: "Hennepin

County Medical Society to meet at office of Dr. N. B. Hill tomorrow evening."

Daily Tribune, Feb. 19, 1870: "Hennepin County Medical Society will meet at the office of Drs. Hill and Lindley this evening [Saturday] at seven o'clock."

Daily Tribune, March 19, 1870: "Hennepin County Medical Society regular meeting this evening [Saturday] at seven at the office of Dr. Hutchinson."

Daily Tribune, April 2, 1870: "Hennepin County Medical Society will meet this evening at the office of Dr. Hutchinson."

Daily Tribune, June 8, 1870: "Hennepin County Medical Society held its annual meeting yesterday. It was chiefly a business meeting. A new constitution and by-laws was adopted, modeled after that of the State Society. The election of officers for the ensuing year resulted as follows: Pres., A. E. Ames; Vice-Pres., N. B. Hill; Secy., Geo. H. Keith; Treas., O. J. Evans. The president appointed the following standing committees: Ethics—C. G. Goodrich, A. H. Lindley, J. J. Linn. Membership—M. D. Stoneman, W. G. Hutchinson, H. H. Kimball. Dr. Kimball was appointed to prepare and read an essay at the next regular meeting."

This is the first reference I have found in the papers to any program, though, according to Dr. Phillips, it was by no means the first paper.

(To be continued.)

PRELIMINARY PROGRAM

MINNEAPOLIS CLINIC WEEK

April 8, 9, 10, 11, and 12.

A more complete program, which is now being compiled, will be issued later. A daily bulletin, issued every afternoon, will give in detail the program for the following day.

SURGERY

At the City Hospital

SURGICAL CLINICS—Daily

Dr. Arthur T. Mann

Dr. Henry C. Stuhr

Dr. F. H. Poppe

Dr. F. L. Adair

Dr. J. H. Simons

Dr. F. R. Wright

Dr. A. H. Parks and Staff

Dr. H. B. Sweetser and Staff

Dr. A. E. Booth

Dr. Edward Moren

At the University Hospital

DIAGNOSTIC, EMERGENCY, AND SURGICAL CLINICS—

Dr. Franklin Wright

Dr. J. E. Moore

Dr. Arthur Strachauer

Dr. James A. Johnson

At St. Barnabas Hospital

SURGICAL CLINICS—

Dr. F. A. Dunsmoor, Daily
 Dr. E. R. Hare
 Dr. R. E. Farr, Daily
 Dr. H. J. Franzen
 Dr. A. A. Laurent
 Dr. A. E. Booth
 Dr. R. J. Phelan
 Dr. S. C. Schmitt
 Dr. A. E. Benjamin
 Dr. W. H. Aurand

At the Northwestern Hospital

SURGICAL CLINICS—

Dr. Gustav Schwyzer
 Dr. A. E. Benjamin
 Dr. A. T. Mann
 Dr. C. Nootnagel
 Dr. Oscar Owre
 Dr. Herman Bouman
 Dr. O. W. Yoerg
 Dr. H. W. Jones

At the Swedish Hospital

SURGICAL CLINICS—Daily

Dr. C. J. Ringell
 Dr. Oscar Owre
 Dr. C. M. Kistler
 Dr. A. E. Johnson
 Dr. Edward Moren
 Dr. Theodore Tennyson
 Dr. John Rishmiller

At Hillcrest Hospital

SURGICAL CLINICS—Daily

Dr. J. W. Little
 Dr. C. G. Weston
 Dr. E. K. Greene
 Dr. A. S. Fleming

At Fairview Hospital

SURGICAL CLINICS—

Dr. Ivar Sivertson, Daily
 Dr. H. N. Sheldrup, Daily
 Dr. Iden, U. S. N.,
 Some Phases of Naval Surgery

At Asbury Hospital

SURGICAL CLINICS—

Dr. Archa E. Wilcox, Daily
 Dr. A. H. Parks
 Dr. E. J. Wanous

At Eitel Hospital

SURGICAL CLINICS—Daily

Dr. G. G. Eitel
 Dr. E. C. Robitshek

At Abbott Hospital

SURGICAL CLINICS—

Dr. A. W. Abbott, Daily
 Dr. A. C. Strachauer
 Dr. Stephen Baxter

At the Norwegian Hospital

SURGICAL CLINICS—

Dr. E. L. Paulson
 Dr. C. D. Whipple
 Dr. C. M. Roan
 Dr. Nimrod Johnson

At St. Mary's Hospital

SURGICAL CLINICS—

Dr. H. B. Sweetser, Daily
 Dr. W. J. Burns, Daily
 Dr. C. E. Henry
 Dr. M. J. Lynch
 Dr. Nimrod Johnson
 Dr. E. O. Voyer, Daily

At St. Andrews Hospital

SURGICAL CLINICS—Daily

Dr. C. Nootnagel
 Dr. H. A. Bouman
 Dr. Hugo Hartig
 Dr. F. L. Adair

OBSTETRICS AND GYNECOLOGY

At the City Hospital

OBSTETRICAL CLINICS—

Dr. F. L. Adair and Staff
 Dr. J. H. Simons
 Dr. H. B. Sweetser and Staff

GYNECOLOGICAL CLINICS—

Dr. H. B. Sweetser
 Dr. J. H. Simons
 Dr. C. O. Maland
 Dr. F. J. Souba

At the University Hospital

OPERATIVE GYNECOLOGY—

Dr. W. H. Condit
 Dr. J. C. Litzenberg
 Dr. J. L. Rothrock

MANIKIN DEMONSTRATION, USE OF FORCEPS—

Dr. J. C. Litzenberg

GYNECOLOGICAL DIAGNOSIS—

Dr. L. W. Barry
 Dr. J. W. Bell
 Dr. W. H. Condit

BEDSIDE CLINICS—

Dr. J. C. Litzenberg
 Dr. W. H. Condit

EYE, EAR, NOSE, AND THROAT

At the City Hospital

DIAGNOSTIC CLINICS—

Dr. J. D. Lewis
 Dr. S. E. Kerrick
 Dr. J. T. Litchfield

SURGICAL CLINICS—

Dr. J. D. Lewis
 Dr. J. S. Reynolds
 Dr. S. E. Kerrick
 Dr. J. T. Litchfield

At the University Hospital

DIAGNOSTIC CLINICS—

Dr. J. S. Macnie
 Dr. G. E. Strout
 Dr. Horace Newhart
 Drs. F. J. and J. A. Pratt
 Dr. W. E. Patterson

SURGICAL CLINICS—

Dr. W. R. Murray
 Dr. H. S. Clark

REFRACTION CLINIC—

Dr. E. A. Loomis

Examination of aviation recruits will probably be given during the week at Millard Hall.

At the Northwestern Hospital

SURGICAL CLINICS—

Dr. E. S. Strout
Dr. Douglas Wood
Dr. Horace Newhart

At St. Barnabas Hospital

SURGICAL CLINICS—

Dr. H. McI. Morton
Dr. W. R. Murray
Dr. J. S. Reynolds
Dr. G. L. Doney

At Asbury Hospital

SURGICAL CLINICS—

Dr. J. A. Watson
Dr. M. R. Wilcox
Dr. H. H. Leavitt

At Eitel Hospital

SURGICAL CLINICS—

Dr. C. N. Spratt
Dr. Justus Matthews
Dr. G. A. Kohler

At the Swedish Hospital

SURGICAL CLINICS—

Dr. E. H. Parker
Dr. Douglas Wood
Dr. J. G. Ericson

At Hillcrest Hospital

SURGICAL CLINICS—

Dr. F. C. Todd
Dr. W. E. Patterson

At Abbott Hospital

SURGICAL CLINICS—

Dr. R. A. Campbell

At St. Mary's Hospital

SURGICAL CLINICS—

Dr. C. D'a Wright
Dr. G. E. Benson

INTERNAL MEDICINE

At the City Hospital

BEDSIDE CLINICS—

Dr. H. L. Ulrich
Dr. E. L. Gardner
Dr. J. G. Cross
Dr. H. L. Staples
Dr. James Hynes
Dr. T. A. Peppard

CLINIC ROOM—

Dr. H. L. Ulrich
Dr. J. G. Cross

At the University Hospital

BEDSIDE CLINICS—

CARDIAC DISEASES, DIABETES, AND RENAL DISEASES

Dr. G. L. Rowntree
Dr. H. L. Ulrich
Dr. R. I. Rizer
Dr. C. B. Wright

GENERAL MEDICINE—

Dr. Chas. Drake
Dr. J. P. Schneider
Dr. Frederick H. K. Schaaf

HEART—

Dr. Olga Hansen

LUNGS—

Dr. F. W. Wittich

At Hillcrest Hospital

HEART AND LUNGS—

Dr. L. A. Nippert

At Hopewell Hospital

TUBERCULOSIS CLINICS—

Dr. F. H. Hacking

At Glen Lake Sanatorium

TUBERCULOSIS CLINICS—

Dr. E. S. Marriette
Dr. F. W. Wittich

At Thomas Hospital

TUBERCULOSIS CLINIC—

Dr. F. H. Hacking

At the Swedish Hospital

MEDICAL CLINICS—

Dr. J. P. Schneider
Dr. S. P. Rees

At the Northwestern Hospital

MEDICAL CLINICS—

Dr. J. G. Cross
Dr. J. M. Lajoie
Dr. J. W. Bell
Dr. C. M. Carlaw

At Fairview Hospital

MEDICAL CLINIC: PERNICIOUS ANEMIA—

Dr. H. Peterson

At St. Barnabas Hospital

MEDICAL CLINICS—

Dr. H. B. Annis
Dr. C. P. Aling

PEDIATRICS

At the University Hospital

GENERAL PEDIATRIC CLINIC—

Dr. F. W. Schlutz

TUBERCULOSIS IN CHILDREN—

Dr. Max Scham

NEW-BORN CLINIC: BREAST-FEEDING—

Dr. J. P. Sedgwick

CONGENITAL DEFECTS—

Dr. F. W. Schlutz

SPASMOPHILIA—

Dr. J. P. Sedgwick

FUNCTIONAL NERVOUS DISEASES OF CHILDHOOD AND

INFANCY—

Dr. E. J. Huenekens

CASE-HISTORIES IN DISEASES OF CHILDREN—

Dr. Max Scham

DEMONSTRATION OF INTUBATION—

Dr. E. J. Huenekens

At Lymanhurst

INFANT-FEEDING—

Dr. F. W. Schlutz
Dr. F. C. Rodda

At the City Hospital—

INSPECTION OF THE MINNEAPOLIS CONTAGIOUS HOSPITAL, AND DEMONSTRATION OF ASEPTIC MEDICAL NURSING—

Dr. F. C. Rodda

EPIDEMIC MENINGITIS: DIAGNOSIS AND TREATMENT—

Dr. Max Scham

At Abbott Hospital

GENERAL PEDIATRIC CLINIC—
Dr. J. P. Sedgwick
X-RAY WORK IN CHILDREN—
Dr. F. C. Rodda

At Pillsbury Settlement House

AMBULATORY INFANT-FEEDING—
Dr. E. J. Hueneckens

At the Swedish Hospital

GENERAL PEDIATRICS—
Dr. F. C. Rodda

NEUROLOGY

At the City Hospital

TECHNIC OF NEUROLOGICAL EXAMINATION WITH
ILLUSTRATIVE CASES—
Dr. L. M. Crafts
CHRONIC CORD DISEASES—
Dr. W. A. Jones
BRAIN SURGERY—
Dr. H. W. Jones
SENSORY CHANGES IN PERNICIOUS ANEMIA—
Dr. A. S. Hamilton
DIAGNOSIS OF LOCOMOTOR ATAXIA—
Dr. Julius Johnson

DERMATOLOGY

At the University Hospital

CLINICS—
Dr. S. E. Sweitzer
Dr. H. E. Michelson
Dr. John Schroeder
Dr. Oscar Owre

At the City Hospital

OPERATIVE CLINIC IN UROLOGY—
Dr. F. R. Wright
Dr. Oscar Owre
BEDSIDE CLINIC IN UROLOGY—
Dr. F. R. Wright

At the University Dispensary

CLINIC IN UROLOGY—
Dr. A. G. Wethall
CLINIC IN SYPHILIS—
Dr. H. E. Michelson
CLINIC IN DERMATOLOGY—
Dr. S. E. Sweitzer

At Wells Memorial

CLINIC IN DERMATOLOGY—
Dr. C. A. Boreen

At Asbury Hospital

CLINIC IN DERMATOLOGY—
Dr. G. P. Crume

RÖNTGENOLOGY

At the University Hospital

DEMONSTRATIONS IN GASTRO-INTESTINAL FLUOR-
OSCOPY; PLATE READING IN LUNG AND HEART
DISEASES; AND STUDIES OF VARIOUS TYPES OF
BONE-LESIONS—
Dr. F. S. Bissell

At the City Hospital

DEMONSTRATIONS IN GASTRO-INTESTINAL FLUOR-
OSCOPY—
Dr. C. A. Donaldson

At Asbury Hospital

RÖNTGEN DEMONSTRATIONS IN CONJUNCTION WITH
MEDICAL AND SURGICAL CLINICS—
Dr. C. D. Harrington

At the Northwestern Hospital

RÖNTGEN DEMONSTRATIONS IN CONJUNCTION WITH
MEDICAL AND SURGICAL CLINICS—
Dr. C. D. Harrington

At St. Barnabas Hospital

RÖNTGEN DEMONSTRATIONS IN CONJUNCTION WITH
MEDICAL AND SURGICAL CLINICS—
Dr. Kenos Ikeda

LABORATORY

At the University Hospital

DEMONSTRATIONS IN PHYSIOLOGY—
Dean E. P. Lyon and Staff
DEMONSTRATIONS IN ANATOMY—
Dr. C. M. Jackson and Staff
LABORATORY DEMONSTRATIONS—
Dr. Frederick H. K. Schaaf
BLOOD-CULTURES, SPINAL FLUIDS, AND COLLOIDAL
GOLD TEST—
Dr. Margaret Warwick
NEW METHOD OF PREPARING VACCINES—
Dr. W. P. Larson

At the Swedish Hospital

WASSERMANN TESTS, ETC.—
Dr. C. R. Drake

At the Radisson Hotel

BONE SARCOMA—
Dr. E. T. Bell

ROUTINE PATHOLOGICAL LABORATORY WORK IN ALL
HOSPITALS IN ASSOCIATION WITH SURGICAL AND
MEDICAL CLINICS—

Northwestern	Abbott
St. Barnabas	Hillcrest
University	St. Mary's
Swedish	Deaconess
City	Asbury
Eitel	Fairview

St. Andrews

PROBABLY DEMONSTRATIONS BY

The Minnesota State Board of Health Lab-
oratories
The Minnesota State Board of Health Lab-
oratories

MISCELLANEOUS ANNOUNCEMENTS

Banquet of the Hennepin County Medical Society and
Clinical Section of the Hennepin County Medical So-
ciety, Radisson Hotel Roof Garden, Monday, April 8,
7 P. M.

Speakers will be announced later. All visiting physi-
cians are invited to attend.

Scientific Meeting, Gold Room, Radisson Hotel, Wed-
nesday, April 10, 8 P. M. Dr. Lewis Fisher, Philadel-
phia, and other speakers to be announced later, will ad-
dress the meeting.

Banquet of the Minnesota Academy of Ophthalmology
and Oto-Laryngology, Radisson Hotel, Wednesday,
April 10, 7 P. M. Address by Dr. Lewis Fisher, Phila-
delphia. Visiting ophthalmologists and oto-laryngolo-
gists are invited to attend.

Gold Room, Radisson Hotel, Daily, 4:30 to 6 P. M.,
motion-picture demonstrations of various surgical oper-
ations, plate exhibits, and demonstrations in röntgenolo-
gy, lantern-slides, exhibits, etc. Demonstration of med-
ical inspection in the public schools.

HOTEL RESERVATIONS SHOULD BE MADE EARLY.

THE JOURNAL-LANCET

Represents the Medical Profession of

Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the

North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.

H. J. ROWE, M. D. - - - Casselton, N. D.

H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

MARCH 15, 1918

THE WORK OF THE ADVISORY BOARDS

The Minnesota Central Medical Draft Committee has succeeded in the past few weeks in creating medical advisory boards throughout the state, as has been done in all other states. The function of these advisory boards is largely that of a consulting body, to which cases are referred by the local boards for further and more extended investigation of the recruits, and to determine whether men should be passed or rejected. These boards in the country meet at stated periods, and not infrequently members of a board live sixty or one hundred miles away. The attendance at the meetings of boards in the country has been kept up marvelously, showing the patriotism of the members in giving up their local business for one or two days each week, traveling long distances, and suffering many inconveniences, in order to cull out the unfit applicants.

In the larger cities the work is a little different, in that the men are not obliged to travel any distance, and, consequently, they can more readily give their time to the work outlined for them. The City of Minneapolis, for instance, has four advisory boards, and in St. Paul there are three. These boards meet daily, that is, Board No. 1 meets Monday, No. 2 meets Tuesday, No. 3 Wednesday, and No. 4 Thursday, and then around the circle again.

At the early meetings there were comparative-

ly few applicants ready for the advisory boards, but, latterly, as the draft goes on, the work is becoming tremendous, and those of us who participate in the work are assured that it may keep up until the end of the war, meaning that many half days must be sacrificed to this very necessary work.

In Minneapolis on February 8, Advisory Board No. 1 received 115 bona-fide applicants, and rejected a large number of men who had failed to pass the war board or the local board. Out of these 115 men, 88 were examined by eight members of the board, and those who have followed this work at all know that it means constant, continuous application and a tremendous amount of investigation. The members of the advisory boards also investigate privately in their own offices such patients as are doubtful, for instance, many tuberculosis patients who show some suspicious symptoms upon the examination at the advisory board headquarters, and are referred for x-ray work, sputum-examinations, and a more thorough physical investigation. This means more time, more effort, and more labor on the part of these volunteers who have received their appointments through the State Board.

The work, in a measure, is somewhat routine, although not infrequently an interesting problem presents itself in the shape of a peculiarly diseased man.

It is surprising how few men with tuberculosis or active heart lesions apply for examination. Most of these cases are turned down by the local board before they reach the Advisory Board. Occasionally one slips by and is carefully investigated, and after his history has been taken, and records made that are essential, he is disqualified.

It is cheerful to note, too, that the greater number of men who apply are anxiously and eagerly willing to enlist, and, so far as we are able to determine, no malingering cases have been brought before the board. Occasionally, a man comes in complaining of a good many subjective symptoms, and, after looking him over and finding no pathology, he is promptly qualified for service, with the hope that the service will do him good and make his subjective and analytic state displeasing to him. Occasionally, an alien comes in who is unregistered and unnaturalized, and the board simply passes upon his physical condition and turns him over to some other board for settlement of his difficulties.

Since the Government has ruled that exemptions are not to be so freely granted, a number

of men have been qualified who have ordinary flat-feet without broken arches, a number who have minor hernias, and also a large number who have lost several teeth. The Government has concluded that if men have been able to chew their way in life for many years, they can probably accomplish the same result in service. Then, too, it is recognized that the dental attention they will receive in camp, will put them in better condition than they were before. This sort of work is interesting, for every examiner must be on the alert and must be able to see very quickly whether the applicant is a fit subject or not. Men of experience who examine these people can readily detect errors that have to be investigated, and it is comparatively rare that anything of importance is overlooked. Some of these men may be returned after an even more thorough investigation has been made at camp, but, as a whole, the State has examined a very large number of men and more are pouring in at each meeting of the local and advisory boards.

THE ENLARGEMENT OF THE MEDICAL CORPS

The enlistment of medical men for medical service in the Army and Navy will greatly deplete the faculties of our medical schools. One-third of the faculty of the Medical School of the University of Minnesota is now in active service in the Army or Navy, and the percentage is relatively larger than from any other department of the University. Altogether, 79 men from the faculty have applied for, or are now engaged in, war service, 8 of whom were physically disqualified. Twenty-nine of these are commissioned in the Medical Reserve Corps of the Army, 1 is commissioned in the Federal Reserve Corps of the Navy, and 3 commissioned in the Army Medical Reserve Corps have been temporarily retired from service. Thirteen are stationed in the University of Minnesota Base Hospital Unit No. 26, 2 are commissioned in the general reserve Corps, 2 are engaged in Government Health Service, 1 is commissioned in the Medical Reserve Corps of the Minnesota National Guard, 2 are in the British Military Service, 1 is commissioned in the French Medical Corps; 12 are serving on medical examining boards, 1 is in the Home Guard and 4 applicants have their commissions pending. This makes a total of 51 men in active military service from the Medical School faculty at the present time. This means that seventy per cent of the faculty

of the Medical School are performing their own work and that of their associates, and it also means a readjustment of classes, which is not a very easy matter. But the routine work of the school has been carried on as in normal times.

A special dispatch from Washington, dated February 27, gives the total strength of the Medical Corps up to that date. "The Medical Corps has grown from 877 to 15,694, including officers of the Regular Army, Medical Reserve, National Guard, and National Army. There have been 31 deaths, 1,050 discharges, and 2,265 promotions. About 4,000 applicants have been rejected, and 21,740 accepted and recommended for commission, of whom, 13,687 are now on active duty. Although all candidates were required to be practicing physicians, certified by the American Medical Association, discharges are continuing at the rate of 50 a week, the Surgeon-General having ordered a thorough weeding out of incompetents."

BACK TO THE FARM

It is quite evident from reports from all parts of the world that the farmer is destined to take a part in winning the world war, and to that end must be an unusual crop-producer in 1918, and, in order to be, it is necessary that sufficient help be obtained to insure the planting and harvesting of all the grain needed. That means that more men will have to be drafted for farm work, perhaps, than for the cantonments; and it is a very suggestive incident to note that the South Side High School of Minneapolis has enrolled 130 boys who are willing to become farmers during the crop-growing season. This does not necessarily imply that these men will be permanently needed on the farms; but their presence there for even one season would result in great benefit to them, and, if more young men would leave the city and spend a summer in hard work on the farm, where the food is plentiful and nutritious, they would come back as sturdy as many of the men who are training in camps.

The various medical boards that are at work on passing upon candidates can easily pick out many men partly deficient, either physically or mentally, who could perform active service on the farm, and, undoubtedly, many of them would come back and pass a satisfactory examination before any drafting board. Even men who are more or less crippled may become valuable aids to the farmer in such work as driving horses, machines, and gasoline tractors. They would be

out of doors working in a way which would mean a hardening of the muscles and toughening of their power of resistance, thus making themselves more physically fit when they return to their duties, whatever they may be, in the cities.

T N T POISONING

An abstract from the *New York Times* of recent date which refers to this deadly poison shows a startling state of affairs. This article is written by Archie Rice on risks and avoidance of T N T (trinitrotoluol) poisoning in the February issue of the *Monthly Bulletin* of the Department of Labor. It is estimated that between 7,000 and 17,000 cases of T N T poisoning, developing between 135 and 475 fatalities, will probably occur among workers in American shell-loading plants during the production of 78,000,000 pounds of cannon munition already ordered by the U. S. Government. These estimates are based on experience in munition plants in the United States, and may be accepted to hold, unless radical improvements are made in the health-conservation practice.

Poisoning from T N T is peculiar in that its effect is produced at periods varying greatly in length; sometimes it occurs within a few weeks, or it may be that months will elapse, after the victim has been attacked and has quit work and perhaps drifted far away, before he shows any of the resulting trouble developing. Consequently, it is well to be forewarned as to the symptoms which occur from this comparatively new compound. The problem is further complicated by the fact that in England the poisoning was not suspected until an alarming number of cases developed among English munition-workers.

T N T poisoning manifests itself in four different ways, according to Mr. Rice. In its simplest form it is merely an irritation of the exposed skin, of hands, face, or arms, with some watery eruptions, something like that caused by ivy poisoning. The commonest form of the poisoning affects the stomach, and extends into the intestinal tract; and is probably due to the fumes or dust, or both, or to vapors which enter the mouth and nasal passages, or is swallowed in impregnated saliva or with food touched by the hands soiled with T N T. Another form of the poisoning is the anemias with progressive loss of color and not infrequently accompanied by jaundice.

When any of these symptoms develop in a strange case, it is well to inquire very definitely into the occupation and former occupation of the individual; and, if there is a suspicion that he has been a munition-worker T N T poisoning should be considered in the diagnosis.

It is rather curious that all efforts on the part of federal officials and health officers, aiming to prevent this very alarming group of symptoms, and to furnish each workman with a memorandum which might help him in his illness later, were absolutely voted down by the group of munition-workers. It was thought that an effort to prevent illness, as well as to lessen the amount of T N T permitted to escape and be wasted, would save the Government about four million dollars in T N T values. It is rather curious to note the psychology of the munition-worker, and to learn that he is unwilling to accept measures which will promote his health or, at least, prevent him from being subjected to these violent and alarming symptoms of poisoning.

CORRESPONDENCE

LOOSE SURGERY

TO THE EDITOR:

Your editorial on the above subject in *THE JOURNAL-LANCET* for February 15 calls attention to a subject that merits more consideration than it has hitherto received.

"Loose Surgery" is fast becoming a much-debated theme of the laity; and the various irregular medical cults are using it for propaganda for all it is worth to inaugurate an era of Bolshevikism in American medicine.

You say: "Unless there is more co-operative and consultation work among the various representatives of the different departments of medicine, loose surgery is going to flourish." This is the gist of whole matter. But how are we to get this very much desired co-operation in practice, especially among the practitioners of the state at large?

Here, for instance, are the villages and towns with from one to half a dozen physicians. Co-operation in one- or two-men towns is impossible because one or two men, both doing general practice, cannot cover the specialties,—not to mention the rivalry usually existing. Co-operation among the half a dozen physicians of one

town is equally impossible because all or nearly all aspire to be surgeons, surgery being the only specialty of money value in medical practice at present.

Formerly the ordinary general practitioner outside of the cities with hospitals and big men referred his difficult, doubtful, and surgical cases to the cities. But now, since the exalted ethics of the profession compel the city surgeon to take all the means the average country patient has, the country physicians cannot do that, as a rule. And so one or two of the latter proceed to rig up a hospital of some kind, and do surgery as best they can. Next, a thousand-dollar x-ray outfit is procured, with other expensive and imposing paraphernalia for so-called scientific diagnosis. And so this one- or two-men team proceeds to cover modern medicine from A to Z. That there will be mistakes in diagnosis and loose surgery goes without saying.

But there is another phase of this situation that is attracting attention. A hospital is an expensive institution to run even with the best of management. Even the big hospitals in the cities whose training-schools furnish service at minimum outlay are always hard up. Then how can it be otherwise with the small hospital with enormous overhead expense and spasmodic patronage? The consequence is that cases must be got somehow. Hence there is always a temptation to strain a point in favor of duration by the proprietor of the hospital. Hence there is bound to be more or less of loose surgery and much unnecessary surgery in small country hospitals. On the other hand, the surgical mania and the love of fame are not unknown things among many so-called big men of the cities. I have more than once referred patients to big surgeons, who proceeded to operate without attempting to verify a provisional diagnosis.

I am not blaming either the country surgeon or the big-city surgeon, I am only stating facts well known to us all. The world owes the country physician a living, and the big-city man a living and some glory besides. It is the system that is wrong. Our social and ethical vision is astigmatic. Our medical hierarchy attempted to correct a simple hyperopia, and now we are astigmatic. But the remedy is on the way—Bolshevikism in medicine, Regnorok, and after that new and better things.

Respectfully,

CHRISTIAN JOHNSON, M. D.
Willmar, Minn., March 8.

REPORTS OF SOCIETIES

THE MINNESOTA ACADEMY OF MEDICINE

The regular meeting of the Academy was held on February 13 with the president, Dr. Cross, in the chair. Dinner preceded the meeting.

Case-reports were made by Drs. Colvin, Owre, Mann, Benjamin, Nippert, Hammes, Sweetser, and Cross.

Three formal papers were presented, one by Dr. Judd on "Esophageal Diverticula," one by Dr. Huenekens (his inaugural thesis) on the "Prophylactic Use of Pertussis Vaccine," and one by Dr. Farr, describing the technic for removal of calculi from the lower ureter and bladder. All three papers were freely discussed, the meeting holding till a late hour.

Thirty-four members and five visitors were in attendance.

REPORTS OF CASES

Dr. J. H. Cross reported a case of carcinoma of the gall-bladder in a woman fifty-six years of age. Nothing unusual was noticed in her condition until last November, when she had an attack of diarrhea, which continued for two or three weeks, accompanied by nausea and vomiting. She began to lose in weight, so much so that by New Year's day she had lost as much as forty pounds. At no time was there pain or jaundice. The vomiting gradually assumed the stomach-retention type. She was taken to the hospital early in January. At this time the urine was scanty,—185 c.c. for the first twenty-four hours,—and contained a large amount of albumin and some red-blood cells, and was loaded with hyaline and granular casts. Her blood-pressure was 102 and 164; no headache; eyegrounds, normal; urea nitrogen in the blood (15 grams per 100 c.c.); creatinin, 1.26, also within normal limits. The urea in the urine was increased in amount.

The renal condition improved rapidly, but the vomiting continued. No blood or pus was found in the stools. The vomitus showed free HCl in amounts from 7 to 17, with a total acidity of 50 to 60. It contained no blood. Upon palpation an indefinite mass in the right hypochondrium had been reported by her physician before she entered the hospital; but of this Dr. Cross was not able to say with certainty that there was anything more than a sense of resistance on inspiration. X-ray examination showed a large and low stomach. The gastric capacity was 55

ounces. The pylorus was evidently constricted. A shadow of barium suggested a hernia into the lesser peritoneal cavity. Vomiting continued, the stomach rejecting its contents more and more frequently.

The patient died February 11 from circulatory failure. At autopsy the following conditions were found: healed tuberculosis (calcified) of one apex; heart, normal; general nephrosis; no glomerular nephritis; stomach, large but otherwise normal except at the pyloric end; gall-bladder, nearly obliterated by a carcinoma containing gall-stones, the mass extending into the liver and invading the duodenum; pylorus, hardly large enough to admit a probe the size of a goose-quill; common duct, free; no metastasis.

Primary carcinoma of the gall-bladder is of comparatively infrequent occurrence, about 300 cases being reported before 1914. From 70 to 90 per cent of the cases are said to be due to gall-stones. It is usually of the cylindrical-cell type, but may be of the round- or of the squamous-cell variety. Dissemination is rare, but extension to the duodenum, stomach, pancreas, and gall-ducts is common. Icterus occurs in about 50 per cent of the cases. The diagnosis is especially difficult, and can be made out with certainty only by exploration.

It seems to be characteristic of a cancer in this location that its progress is rapid, for death usually follows in a few months.

Dr. Oscar Owre exhibited a number of x-ray plates. One showed a stone in the pelvis of the right kidney; another showed the radiographic catheter in the pelvis, touching the stone. Attention was called to the fact that this was a better method of locating the stone than filling the pelvis of the kidney with thorium. The patient was a woman seventy-six years of age, and the stone was removed by a pyelotomy under gas anesthesia.

Another case was illustrated with four x-ray plates. The patient was a woman about thirty years of age who had a stone the size of a bean in the interstitial portion of the left ureter. The first plate showed the stone. The second plate showed the stone in contact with the radiographic catheter. The third plate was taken after warm glycerine had been injected, and showed the axis of the stone to have been changed. And the fourth plate showed the pelvis free from the stone, its removal having been accomplished by dilating the lower ureter with successively increasing sizes of dilators.

FRED. ELMER LEAVITT, M. D., Secretary.

BOOK NOTICES

THE AMERICAN ILLUSTRATED DICTIONARY. By W. A. Newman Dorland, A. M., M. D., F. A. C. S. Ninth Edition, Revised and Enlarged. Philadelphia: W. B. Saunders Company, 1917.

Dr. Dorland has become *the* "dictator" in respect to medical language; and every physician who cares to understand the language he reads, should hold in perpetuity a good thought for the man who has given the profession a dictionary that is very excellent at many particulars, and deficient at no point. Dr. Dorland's definitions are admirable, and are always as brief as the limitations of the average medical reader will permit,—they are not so brief as to be unintelligible or uninforming, and they certainly are not padded. This point of merit makes a dictionary a delightful companion-piece for any medical matter one is reading, and thus enhances the value of what one reads.

A word that properly begins with a capital letter is so written in this dictionary; and a word that begins with a smaller letter is also so written here. Thus we learn to write "Roentgen rays" and "roentgenogram," the former, a proper adjective, taking the capital initial, and the latter, a common noun, taking the small initial. Such information is exceedingly grateful to a writer who is not informed on such points.

Equally pleasing and helpful is to find words properly written as to the use or omission of the hyphen. Thus we find "occipito-anterior" and "occipitoposterior,"—one a hyphenated and the other a solid word.

In connection with the above comments we turn aside here to note two typographical errors that have attracted our attention within a few days while using the dictionary. On page 208 occurs "wandering-cell" and on page 1135 "*roentgen rays*." The former term is properly written as two words on page 1122, and the latter is properly written with a capital initial letter on page 867. The work is so remarkably free from typographical errors that we feel at liberty to refer to these two slips as a reminder that one should understand the principles which underlie usage sufficiently well to enable him to detect most errors, at least of this kind.

The grouping of definitions, as under "tests," "signs," "operations," etc., is excellent dictionary-making. It saves space, and it assists the reader quickly to find what he wants. And likewise the tables are to be highly commended. Such an one as the posologic and therapeutic table is invaluable, and may profitably be consulted by a good many "grown-ups" in medicine.

The illustrations are numerous, and they are used for the purpose of illustrating what cannot be defined by words. And there is much more to commend this work to all medical students.

But why a new edition in a brief two years since the *eighth* edition was published? Current medical literature answers by demanding space for 2,000 new words, some of which are met almost daily by readers of medical books and journals.

Mechanically, the volume is well-nigh perfection. The character and size of the type makes a readable page; and the flexible binding makes the book easy to handle.

THE GYNECOLOGY OF OBSTETRICS: AN EXPOSITION OF THE PATHOLOGIES BEARING DIRECTLY ON PARTURITION. By David Hadden, B. S., M. D., New York. The Macmillan Company, New York.

This little monograph is very interesting. It contains some attractively colored anatomical plates, which, unfortunately, are too small for easy scrutiny. The text deals with those conditions which result from parturition, and cause more or less invalidism. It emphasizes the close relationship which exists between obstetrics and gynecology.

Consideration is given to the anatomy of the pelvis, especially that of the cervix and perineum. This is clarified by drawings and plates, many from original specimens of the author.

Careful explanation is given of the mechanics of the relaxed outlet, together with the etiology and prevention of injuries to the pelvic floor.

The pathology of cervix uteri is elucidated, and treatment of various conditions explained. Various operative procedures are described, mostly more common ones, such as curettage, trachelorrhaphy, perineorrhaphy, colporrhaphy. Miscarriage and sterility are briefly taken up. Some affections of the urinary system are also given consideration.

The work is a praiseworthy attempt to bring some order out of chaos. The author tries to stick to fundamental principles, and not to become lost in the endless variety of operations which mar many works.

—ADAIR.

MEDICAL CLINICS OF NORTH AMERICA. Vol. I, No. 1. Published bimonthly by W. B. Saunders Company, Philadelphia and London. Price, per year, \$10.00.

The first number of this series of Medical Clinics of North America is devoted to Johns Hopkins Hospital, Baltimore, and gives promise of delight if the present high standard can be maintained.

In this number Postural Albuminuria, by Dr. Theodore C. Janeway, with an appended bibliography, is especially valuable. One regrets that Dr. Janeway's untimely death will prevent his giving us the same masterly handling of other subjects.

Dr. Llewellys F. Barker on Meningitis, probably meningococcal, and Dr. Herman O. Mosenthal on Hypertension and The Dietetic Treatment of Diabetes Mellitus, are excellent.

Dr. Thomas Fitcher and Dr. Louis Hamman present clinics on Acromegaly, Raynaud's Disease, The Clinical Aspects of Hypertension, Milroy's Disease, and Dermoid Cyst of the Mediastinum.

Dr. Thomas R. Brown's notes on Gastro-Intestinal Disorders are also appreciated by the reader.

The typography and the mechanical work commend themselves, and one looks forward with pleasure to succeeding numbers.

—CROSS.

DISEASES OF THE SKIN. By Milton B. Hartzell, Professor of Dermatology, University of Pennsylvania. Philadelphia: J. B. Lippincott Company. Price, \$7.00.

Hartzell's "Diseases of the Skin" is the result of the author's experiences covering twenty-five years in this special department of medicine. He mentions recent discoveries, and reports on them in the light of his own experiences, disagreeing with other writers where he believes that his experiences justify such disagreement.

The microphotographs of sections taken at biopsy

are very good, and the halftones of the various diseases are the feature of the book.

The colorplates are not so good. The majority of them are indistinct, and the colors are not accurate. This is probably a typographical fault which will be corrected in subsequent editions.

The text is concise, clear, and interesting throughout.

Therapy is gone into in detail, and many valuable recipes are given. The therapy of lues is outlined, but no definite courses for prolonged medication are given.

The author does not commit himself on the much mooted question of intraspinal medication.

—MICHELSON.

APPLIED IMMUNOLOGY. The Practical Application of Sera and Bacterins Prophylactically, Diagnostically, and Therapeutically, with an Appendix on Serum Treatment of Hemorrhage, Organotherapy, and Chemotherapy. By B. A. Thomas, A. M., M. D., and R. H. Ivy, M. D., D. D. S., of the University of Pennsylvania. 73 plates and illustrations. Second edition revised. Philadelphia and London: J. B. Lippincott Company, 1916.

This is a well-written book, dealing specifically with immunological subjects. Its first few chapters deal with the theory of the production of the various immunological bodies. It then discusses the production, uses, and values of various therapeutic sera.

Several chapters are devoted to bacterial vaccines, an especially valuable chapter being the one in relation to the various pathological conditions in which vaccine therapy is indicated and valuable.

The subject of the Wassermann reaction, as well as that of the other less commonly used complement-fixation tests, is carefully covered as to technic, value, and clinical interpretation.

The appendix contains some interesting information on serum treatment of hemorrhage, organotherapy, and the subject of salvarsan and salvarsanized serums.

The book is brief, clear, and entertainingly written. One does not tire because of a great mass of theoretical technical phraseology.

The authors emphasize the best methods of technic, as well as the practical clinical application of immunologic facts.

—DRAKE.

NEWS ITEMS

Dr. W. G. Nuessle has moved from Milroy to Springfield.

Dr. W. H. Gray has moved from Ray, N. D., to Wheelock, N. D.

Dr. Peter Bakke, of Grantsburg, Wis., who formerly practiced in Minneapolis, died last week at the age of 52.

Dr. P. J. Bursheim, of Lake Benton, has been honorably discharged from military service because of poor health.

Dr. Ward Akester, of Marshall, has been honorably discharged from the M. R. C. on account of physical disability.

Word has been received in St. Paul that Lieut. John S. Abbott of the M. R. C., in France, is suffering from trench fever.

Capt. Emil Geist, of Minneapolis, who has been at Fort Oglethorpe, Ga., for several months, has been promoted to be a major.

Capt. N. J. Shields, of Wahpeton, N. D., has been honorably discharged from the M. R. C. on account of physical disabilities.

Dr. Justus Ohage, health commissioner of St. Paul, is codifying the city's health laws with a view to their distribution and enforcement.

Dr. W. H. Rowe has resigned his position as resident physician of the St. James Hospital and Sanitarium, and has resumed private practice in St. James.

Another student nurse has been dismissed from the Minneapolis City Hospital for dallying with liquor. She had a bottle of whisky in her pocket while on duty.

Dr. L. G. Rowntree, Professor of Medicine in the University of Minnesota, underwent an operation last week at the Mayo Clinic for intestinal trouble.

The annual report of the Swedish Hospital of Minneapolis shows that 4,674 patients were treated in the hospital last year, in addition to 1,345 out-patients.

Major Frank C. Todd, of Minneapolis, has been placed in charge of the base hospital at Camp Dodge, Iowa. This hospital can accommodate nearly 2,000 patients.

The graduating class of the Eitel Hospital, Minneapolis, Training-School for Nurses will hold graduating exercises on March 20, when ten nurses will receive diplomas.

The Minnesota State Board of Health has received a large supply of salvarsan, and is distributing it among the State dispensaries for free use by physicians under proper restrictions.

Dr. Louis Fisher, of Philadelphia, an eminent otologist, who has specialized in labyrinthian work, will be a speaker on the scientific night, Wednesday, April tenth, at the Minneapolis Clinical Week.

A call for 5,000 nurses has been made by Surgeon-General Gorgas for service in the army hospitals at home and in Europe. One-third of the registered nurses in the United States may be needed this year.

Dr. Olaf Sohlberg, of St. Paul, died last week at the age of 59. Dr. Sohlberg died upon a train while returning from a visit to his son, Capt. Olof I. Sohlberg, who is a surgeon at Camp Cody, New Mexico.

Dr. Ida Alexander, of Sauk Center, is the first woman physician of Minnesota to be sent to France by the Red Cross. She was given a reception at the residence of Dr. Auten Pine in St. Paul on the eve of her departure.

Dr. H. M. Bracken, executive officer of the Minnesota State Board of Health, has been in Washington in conference with the Government officials concerning the suppression of venereal diseases. Active aid is expected from the Government.

The hospitals, eighteen in number, of Minneapolis, have adopted a uniform purchasing system, and all articles bought must be up to standard and right in price. The quality of coal, of chemicals, and, so far as possible, of everything bought will be tested.

The Range Medical Society met at Hibbing last month. Papers were read as follows: "Diseases of Children," by Dr. O. W. Rowe, of Duluth; and "Sympathetic Inflammation of the Eyes," by Dr. C. F. Morsman, of Hibbing. A banquet was enjoyed after the business meeting.

A bill is now before Congress to place members of the Medical Reserve Corps, if in active duty, on an equal footing with members in the regular Medical Corps, and also to give medical officers higher rank in the army than lieutenant, captain, and major, the only ranks now open to them.

The College of Pharmacy of the University of Minnesota has just shipped to Washington, D. C., 4,000 pints of tincture of digitalis for use in the base hospitals. THE JOURNAL-LANCET has recently published articles on the high quality of Minnesota digitalis, grown at the University.

In *The Medical Pickwick* for February, Dr. Fred Elmer Leavitt, of St. Paul, tells, in a delightfully imaginative manner (in ten verses) "Why the Stork Left." Who knew that Dr. "Fred," secretary of the Minnesota Academy of Medicine and author of a forthcoming book on gynecology, was, indeed, a poetic gynecologist?

The Administrative Board of the School of Medicine of the University of Minnesota, in response to a request for an expression of opinion from the Universal Training League, passed a resolution favoring compulsory universal military training because "it regards such a move as physically, politically, and economically desirable."

The death-rate in Minnesota for 1917 was 11.4 per 1,000 inhabitants, which is very low. The deaths from tuberculosis in 1917 fell slightly below the number in 1916, while the deaths from

cancer in 1917 showed a slight increase, bringing the number of deaths in 1917 from the two causes very near together, they being, from tuberculosis, 2,291 and from cancer 1,900.

The program of the March meeting of the Hennepin County Medical Society was a symposium on radium. The papers and discussion with case-reports and illustrations made a marked impression on all present. Papers were read by Drs. A. S. Fleming, J. Warren Little, and S. E. Sweitzer. These papers and their discussion, with photographs, will appear in an early issue of THE JOURNAL-LANCET.

The junior class of the University Medical School on March 2 gave Dr. J. E. Moore, Chief of the Department of Surgery, a handsome silver loving-cup on the occasion of his birthday. The inscription on the cup reads as follows: "Presented to Dr. James E. Moore, birthday remembrance, by the class of 1920, College of Medicine and Surgery, University of Minnesota, in token of high esteem and admiration, March 2, 1918.

The Children's Bureau of the U. S. Department of Labor, with the co-operation of other national and state organizations, is preparing for a child-welfare campaign that will save 100,000 lives this year. Minnesota's quota of lives thus to be saved is 2,134. The essential lines of work in the campaign are as follows: (1) The registration of births, that the need of all children may be ascertained; (2) prenatal care, necessary care of doctor and nurse at confinement, and after-care; (3) clinics for sick children; (4) public-health nurses; (5) the organization of bureaus of child hygiene; (6) guarding of the milk supply; (7) a living wage for the bread-winner; (8) a state-wide baby week in every state.

Dr. Clifford E. Henry, of Minneapolis, has been commissioned by the American Red Cross to organize and act as Director of Naval Station Hospital Unit No. 10, which will be taken over later by the U. S. Navy. The personnel is as follows: Dr. Clifford E. Henry, grade of surgeon, rank of Lieutenant Commander; Dr. Clinton C. Tyrrell, grade of surgeon, rank of Lieutenant Commander; Dr. John T. Litchfield, grade of past assistant surgeon, rank of Lieutenant; Dr. J. Arthur Riegel, grade of assistant surgeon, rank of Lieutenant (j. g.); Dr. William P. Robertson, grade of assistant surgeon, rank of Lieutenant (j. g.). This will be supplemented by junior officers from the regular U. S. Navy; and the nurses will be Red Cross nurses from Minneapolis and St. Paul.

RECENT ASSIGNMENTS OF NORTHWESTERN MEDICAL OFFICERS

Minnesota—

To Fort Riley, Kan.: Lt. L. L. Leonard, Minneapolis; Lt. W. H. Halloran, St. Paul.

To Fort McPherson, Ga.: Lt. S. D. Weaver, Rochester.

To Dansville, N. Y.: Lt. L. R. Koller, Minneapolis.

To Fort Sam Houston, Texas: Lt. F. G. Blake, Minneapolis.

To Memphis, Tenn.: Lt. G. C. Black, Minneapolis.

North Dakota—

To Camp Dodge, Iowa: Lt. J. R. Mackenzie, Carrington.

Montana—

To Portland, Ore.: Capt. E. A. Gerhart, Billings.

To New York (Rockefeller Institute): Lt. C. O. Rinder, Deer Lodge.

A SPLENDID OPENING

There is an excellent opening in a fine village near the Twin Cities for a high-grade physician who can do some surgical work. A man under forty is preferred. A splendidly equipped office is ready for him. There is nothing to sell; simply the right man is wanted. Address 107, care of this office.

POSITION WANTED

I desire a location as assistant or as associate to a physician in a town of 5,000 or over in the Northwest. I am married and have two children, and am a graduate of the N. Y. U. Medical College, '10. Have had two years' internship, 3 years private practice and 3 assistantship. Address 117, care of this office.

POSITION AS OFFICE ASSISTANT WANTED

By a young woman who has been assistant for over five years to a surgeon now called to army service. She can do all the work required of an assistant in minor operations, keep books, do correspondence, operate an x-ray machine and develop plates, etc. Address 115, care of this office.

PARTNERSHIP WANTED

Physician of ten years' successful practice desires association with physician or surgeon in city of 4,000 or more where there is opportunity for permanent practice; American, Protestant, aged 36; Minnesota license; reciprocity; just completing twelve-month postgraduate course surgery and urology; proposition must be strictly ethical and bear investigation; references exchanged. Address 116, care of this office.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-first annual session, opened Sept. 24, 1917, and closes June 8, 1918. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters this session. For further information address Charles Chassignac, M. D., Dean, New Orleans Polyclinic, post office drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Fuerperal Septicemia	Accidental Deaths
Ada	1,253	1,432	1															
Albert Lea	4,500	6,192	9															
Alexandria	2,681	3,001	1			1										1	1	3
Anoka	3,769	3,972	8			1												1
Austin	5,474	6,960	8	1													2	
Barnesville	1,326	1,352	3															
Bemidji	2,183	5,099	10			1									1		1	
Benson	1,525	1,677	2			1										1		
Blue Earth	2,900	2,319	1															
Brainerd	7,524	8,526	7			1												2
Breckenridge	1,282	1,840	0															
Canby	1,100	1,528	2															
Cannon Falls	1,239	1,385	1															
Chaska	2,165	2,050	1															
Chatfield	1,426	1,226	0															
Cloquet	3,074	7,031	3															
Crookston	5,359	7,559	8			1										1	1	
Dawson	962	1,318	5			1												
Detroit	2,060	2,807	6	2														
Duluth	52,968	78,466	89	5	3	14	2	3								4	5	1
East Grand Forks	2,077	2,533	2															
Ely	3,572	3,572	7														1	
Eveleth	2,752	7,036	7													1		1
Fairmont	3,440	2,958	5			2												
Faribault	7,868	9,001	3														1	
Fergus Falls	6,072	6,887	4			1												1
Glencoe	1,788	1,788	4														1	
Glenwood	1,116	2,161	1															
Granite Falls	1,454	1,454	2														1	
Hastings	3,811	3,983	5			1											1	
Hutchinson	2,495	2,368	1															
International Falls		1,487	1															
Jordan	1,270	1,151	5			1											1	
Lake City	3,142	3,142	6															1
Le Sueur	1,937	1,755	4			1											1	
Little Falls	5,774	6,078	4															
Luverne	2,223	2,540	2													1		
Madison	1,336	1,811	2			1											1	
Mankato	10,559	10,365	16	1													1	
Marshall	2,088	2,152	4			1												1
Melrose	2,591	2,591	3														1	
Minneapolis	202,718	301,408	338	32	6	40	3									2	29	14
Montevideo	2,146	3,056	4								3						1	
Montgomery	979	1,267	*															1
Moorhead	3,730	4,840	2															
Morris	1,934	1,685	3															1
New Prague	1,228	1,554	0															
New Ulm	5,403	5,648	13		1													
Northfield	3,210	3,215	1														1	
Ortonville	1,247	1,774	0															1
Owatonna	5,561	5,658	6			3												
Pipestone	2,536	2,475	0														1	
Red Lake Falls	1,666	1,666	1															
Red Wing	7,525	9,048	9														2	
Redwood Falls	1,661	1,666	3															
Renville	1,075	1,182	0															
Rochester	6,843	7,844	47	3	1	3	1										13	3
Rushford	1,100	1,011	3															
St. Charles	1,304	1,159	3														1	
St. Cloud	8,663	10,600	20			3											1	1
St. James	2,102	2,102	3	20													2	
St. Paul	163,632	214,744	218	1	2	22	3	1								7	15	16
St. Peter	4,302	4,176	2		1						1							
Sauk Centre	2,154	2,154	0															
Shakopee	2,046	2,302	0															
Sleepy Eye	2,046	2,247	1		1													
South St. Paul	2,322	4,510	4			1												
Staples	1,504	2,558	1		1													1
Stillwater	12,318	10,198	14														2	
Thief River Falls	1,819	3,174	2														1	
Tower	1,111	1,111	0															
Tracy	1,911	1,826	1					1										
Two Harbors	3,278	4,990	2	1													2	
Virginia	2,962	10,473	14	1		3	2	1										
Wabasha	2,622	2,622	5														1	
Warren	1,276	1,613	0															
Waseca	3,103	3,054	2														1	
Waterville	1,260	1,273	1		2													
West St. Paul	1,830	2,660	2															
Willmar	3,409	4,135	3															
Winona	19,714	18,583	15			5												1
Winthrop	813	1,043	2			1												1
Worthington	2,386	2,386	2															

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	0															
Aitkin	1,719	1,638	1															
Akeley			0															
Appleton	1,184	1,221	3															
Belle Plaine	1,121	1,204	1															
Biwabik		1,690	1															1
Bovey		1,377	1	1														
Browns Valley	721	1,058	1													1		
Buffalo	1,040	1,227	1													1		
Caledonia	1,175	1,372	0															
Cass Lake	546	2,011	1															
Chisholm		7,684	45	1	1													
Coleraine		1,613	2															1
Delano	967	1,031	0															
Farmington	733	1,024	1															
Fosston	864	1,055	1															
Frazee	1,000	1,645	4	1														
Grand Rapids	1,428	2,239	1													1		
Hibbing	2,481	8,832	10			4	1											
Jackson	1,756	1,907	0															
Janesville	1,251	1,173	2															
Kenyon	1,202	1,237	1													1		
Lake Crystal	1,215	1,038	1													1		
Litchfield	2,280	2,333	2													1		
Long Prairie	1,385	1,250	0															
Madelia	1,272	1,273	1															
Milaca	1,204	1,102	0															
Mountain Lake	959	1,081	3															
Nashauk		2,080	2										1					1
North Mankato	939	1,279	1	1														
North St. Paul	1,110	1,404	1															
Osakis	917	1,013	2													1		
Park Rapids	1,312	1,850	0															
Pelican Rapids	1,033	1,019	2															
Perham	1,182	1,376	5		1												1	
Pine City	993	1,258	1													1		
Plainview	1,038	1,175	0															
Preston	1,278	1,193	1															
Princeton	1,319	1,555	4														1	1
St. Louis Park	1,325	1,743	2															
Sandstone	1,189	1,818	1															
Sauk Rapids	1,391	1,745	1			1												
South Stillwater	1,422	1,343	0															
Springfield	1,511	1,482	0															
Spring Valley	1,770	1,817	1															
Wadena	1,520	1,820	5															
Wells	2,017	1,755	2													1		
West Minneapolis	2,250	3,022	1															
Wheaton	1,132	1,300	1															
White Bear Lake	1,288	1,505	1															
Windom	1,941	1,749	0															
Winnabago City	1,816	2,555	0															
Zumbrota	1,119	1,138	1															
STATE INSTITUTIONS			0															
Anoka, Asylum			0															
Fairbault, School for Blind			0															
Fairbault, School for Deaf			0															
Fairbault, School for Feeble Minded			6	2														
Fergus Falls, Hospital for Insane			11	1		2				2								
Hastings, Asylum			4													1		
Minneapolis, Soldiers' Home			5	1														
Owatonna, School for Dependents			0															
Red Wing, State Training School			0															
Rochester, Hospital for Insane			10															
Sauk Centre, Home School for Girls			0															
St. Peter, Hospital for Insane			12	2														
St. Cloud, State Reformatory			1															
Stillwater, State Prison			1	1														
OTHER PARTS OF STATE			738	54	9	86	12	4	4		6	2	0	0	22	62	3	47
Total for state			1865	135	25	203	24	10	4		10	2	1	5	42	166	10	110

*No report received. REGISTRAR not doing his duty
113 stillbirths not included in above totals.

Some Facts About Oats

Pound for pound—in food units—they are about twice as nutritious as round steak.

They are 10 per cent over wheat.

They form a uniquely balanced food with all the needed elements, including vitamins and bran.

They are rich in phosphorus and lecithin.

They are uniquely economical.

Quaker Oats supply nutrition at a cost of five cents per 1000 calories.

In other foods those same food units average about as follows:

In Eggs	50c
In Meats	40c
In Chicken	90c
In Bread	9c

Seven full meals on Quaker Oats cost the same as one ham-and-egg meal.

Quaker Oats

The Flavoury Flakes

Quaker Oats excel in flavor because we use the queen grains only—just the plump, rich oats. We get but ten pounds from a bushel. They won supreme place because of that flavor—a world-wide preference. Yet they cost no extra price.

The Quaker Oats Company
Chicago

Minneapolis Clinical Laboratory

Oldest in the Northwest

N. W. Nic. 3690 410 Syndicate Bldg. T. S. 33 117

We make Auto vaccines from discharges
or the blood

Wassermann Test - - - \$5.00

Serum Test for Gonorrhea, \$5.00

Serum Test for Tuberculosis, \$5.00

HENRY L. ULRICH, M.D., Director

Private Maternity Home

(Incorporated)

For Women before and during Confinement.

Infants cared for.

Physicians and Nurses in Attendance.

Good References Given.

MRS. CORA MOREY, Supt.

2014 26th Ave. So.,

MINNEAPOLIS, MINN.

N. W. Main 6768

Use Vaccines in Acute Infections

The early administration of Sherman's Bacterial Vaccines will reduce the average course of acute infections like Pneumonia, Broncho-pneumonia, Sepsis, Erysipelas, Mastoiditis, Rheumatic Fever, Colds, Bronchitis, etc., to less than one-third the usual course of such infectious diseases, with a proportionate reduction of the mortality rate.

Sherman's Bacterial Vaccines are prepared in our specially constructed Laboratories, devoted exclusively to the manufacture of these preparations and are marketed in standardized suspensions.

Write for Literature.



G.H. SHERMAN, M.D.
Detroit, Mich.
U.S.A.

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY
AND PROMPTNESS ARE OUR
CHIEF AIMS. Send to our nearest
laboratory for fee list and containers
with instructions for collecting all
specimens. These containers will be
sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses
of tissues removed at operation should be part
of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and
aerobically and isolate the offending organ-
isms. Pipettes for collecting material for auto-
genous vaccines sent upon request.

Wassermann Test, Blood or

Spinal Fluid \$5.00

We do the classical test. Any of the various
modifications will be made upon request without
additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories

(Incorporated)

CHICAGO, ILL.

5 S. Wabash Ave.

ST. LOUIS, MO.

4485 Olive St.—Corner Taylor

NEW YORK, N. Y.

18 E. 41st St.

PUBLISHER'S DEPARTMENT

THE RIVER PINES SANATORIUM

So many nice things may truthfully be said, in addition to those that have already been said in these columns, about the River Pines Sanatorium of Stevens Point, Wis., that we shall at this time simply call attention to the fact that its literature is well worth sending for by every physician who has a case of tuberculosis on his hands.

Dr. John W. Coon, the medical director, puts emphasis upon the things that constitute the fully recognized essential elements in treatment; and his sanatorium seeks to offer such treatment to its patrons.

IN THE GARDEN, FLOWER OR VEGETABLE

The man who has a few square yards of soil, and does not plant a garden in this fourth year of the war, is—forgetful, if not unpatriotic. A cursory turning of the pages of Dreer's 1918 Garden Book, with its beautiful illustrations of flowers and vegetables and its culture notes, will give almost any red-blooded person the garden fever; and then think of the result in health and happiness and good things to eat and look at.

Do not fail to get a Dreer 1918 Garden Book, and to so use it that it will drive you, Mr. Doctor, or your wife or daughter or son, back to the soil; and, then, you might prescribe this remedy for *all* your patients.

E. R. SQUIBB & SONS

The name of "Squibb" is a very honorable one, and every Squibb product is accepted by the medical profession as possessing well-nigh perfection in the purity of its ingredients, and mode of composition where skill in compounding is essential to its manufacture. Not a few of the staples in medicine are almost monopolized by the Squibb house because of the known high standard given them by this firm, and guaranteed by their name.

Their announcement in this issue refers to Liquid Petrolatum, which calls for special care and skill in its preparation as a medicinal product.

GRADWOHL BIOLOGICAL LABORATORIES

The public biological laboratory of today is doing a work only second in importance to the high-grade post-graduate school; and its work is rapidly growing in importance, for it not only makes an analysis of specimens submitted to it, but it helps the doctor to interpret the findings. It is self-evident that special training in this line, exclusive devotion to this work alone, and unlimited opportunity for experience, make the laboratory man a specialist in every sense of the word.

Few men have done better work in this line than Dr. R. B. Gradwohl, the founder and director of the Gradwohl Laboratories of St. Louis, Mo., and the physician who seeks the aid of this laboratory will find its work entirely satisfactory and not infrequently of very great help to him in the diagnosis of obscure cases.

DIAPER RASH

The irritated conditions which are so frequently observed around the genitals and buttocks of young infants are particularly amenable to the soothing action

of K-Y Lubricating Jelly. Of course, the digestive organs of the little sufferer must be interrogated, its diet corrected if necessary, and proper care given to changing the diapers and cleansing the parts. If, in addition to attending to these matters K-Y Lubricating Jelly is used after each bath and whenever the diapers are changed, the distressing rash and excoriations which are so often responsible for the fretting and restlessness of young infants, can be relieved, and can be avoided in the majority of instances. K-Y Lubricating Jelly is absolutely harmless, and has the great advantage that it never stains or soils the clothing or bed linen. It is emollient, detergent, and healing.

For samples address Johnson and Johnson, Van Horn & Sawtell, Dept. 15, 17 East 40th St., New York City.

THYROIDS AND THYROID TABLETS

In the British Medical Journal for October 20, 1917, Dr. Carver, M. R. C. P., London, emphasizes the necessity of specifying a reliable brand of Thyroids and Thyroid Tablets. He called attention to the way in which some manufacturers label their preparations.

If the doctor will demand Armour's, he will know that his patient gets a specific quantity of thyroid tissues because they standardize their Desiccated Thyroids and Thyroid Tablets.

Each Thyroid Tablet (Armour) contains a certain quantity of standardized thyroids, and that amount of thyroids represents five times as much fresh thyroid gland.

Whenever a preparation of any of the endocrine glands is required, the physician should specify Armour's and see that his patient gets Armour's, and nothing else; for a doctor prescribes a preparation for a certain purpose, and he can expect results only from first-class products.

IMMUNIZATION AGAINST DIPHTHERIA AND SMALLPOX

The advantages of immunization against diphtheria have been well demonstrated. The records of the New York City Health Department,—80,000 immunized with a morbidity of 0.2 per cent—furnish ample evidence of the value of diphtheria antitoxin in combating this disease.

An antitoxin of high potency, small bulk, and low protein content, is supplied by Eli Lilly & Company, Indianapolis. This product is prepared under aseptic conditions by improved methods of concentration and purification.

Many experienced clinicians recommend in mild cases, 5,000 units, in moderate cases 10,000 units, and in severe cases 20,000 units. Diphtheria antitoxin should be given at once when evident clinical symptoms of diphtheria are present. The Lilly product can be supplied quite readily, through the drug trade, in convenient syringe packages.

Another product of the Lilly Biological Laboratories that is eminently satisfactory to physicians is "Smallpox Vaccine Virus, Lilly." In primary vaccinations this virus is said to yield the maximum percentage of "takes." The searching tests made at the Lilly Biological Laboratories to determine the potency and purity of vaccine virus is assurance that the product will give satisfying results if proper cold storage precautions have been observed.

"KELENE"

PURE CHLORIDE OF ETHYL

For Local and General

ANAESTHESIA

Manufacturers

FRIES BROS.

92 Reade St.

::

NEW YORK

Sole Distributors for the United States

MERCK & CO.

New York

Rahway

St. Louis

Literature sent upon request

Platt's Chlorides

**The Odorless
Disinfectant**

Now on the market for over forty years has won the endorsement of the medical profession throughout the country.

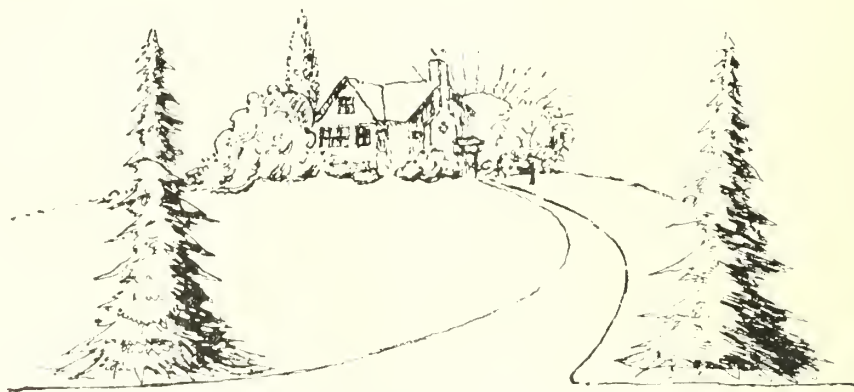
IS ABSOLUTELY ODORLESS
YET STRONG AND
EFFECTIVE



*Write for sample and
booklet to the
manufacturers.*

Henry B. Platt Co.

53 Cliff St., N. Y. C.



LANDSCAPE DESIGNING

Let Us

Develop Your Grounds in the Modern
Natural Way

THE JEWELL NURSERY CO.

LAKE CITY, MINN.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, APRIL 1, 1918

No. 7

THE CLOSURE OF FECAL FISTULÆ*

By ARCHIBALD MACLAREN, M. D., F. A. C. S.

ST. PAUL, MINNESOTA

One of the latest theories regarding deaths occurring in the course of a septic peritonitis, is that the patient dies from the absorption of toxic materials from his own obstructed intestinal canal, and not from the peritonitis *per se*. John W. Draper says peritonitis produces a septic paresis of the intestine, and its dammed-up putrid contents poison the individual so that he dies an acute septic death. Many such cases have been reported of late, and especially some intensely dramatic ones by Nyaelasy in the *British Journal of Surgery* of recent date.

If this theory is correct—and from our limited experience we believe that it frequently is the case—then the formation of a fecal fistula is the logical line of treatment in every case of septic peritonitis associated with intestinal distension. In one of our recent cases the patient was saved in this manner, only to die several days later, not from his intestinal poisoning, but from the sepsis of a large, unrecognized subdiaphragmatic abscess.

If, then, the formation of fecal fistulae is to be a recognized course of treatment, the methods of closure are of special interest. In looking over our surgical histories of over 5,000 major operations running back during the past thirty years of surgical practice, we find the records of 77 fecal fistulae following or associated with some intra-abdominal surgical condition which may be

worth studying for a few minutes. There were 15 deaths, or a mortality of 19 per cent, which is a large mortality; but we must remember that these were often the very worst possible surgical risks, many of them done over twenty-five years ago,—bad appendiceal abscess cases associated with gangrene of the cecum, and, worse still, the mixed tuberculous fecal abscess cases, where the only hope for the patient was the assumption of a terrible risk by both patient and surgeon, as recently pointed out by Morrison in Binney's "New Surgery." This class is small, for many of these 77 cases were the accidental fecal fistula cases which closed by themselves. We were careful to exclude the cases of wound-suppurations where the colon-bacillus infection caused a discharge which resembled fecal matter, but which cleared up in a few days and really never was true fecal matter.

We find that the largest number (24 cases) of fecal fistula cases followed operation for appendiceal abscess. The next largest (22 cases), were associated with ovarian abscess; and 16 cases were due to tuberculosis, when the fistulous openings were between the tubal tuberculous abscess and the intestine. Eight cases followed injury to the intestine, including intussusception with gangrene. Three cases were associated with carcinoma of the colon. There were two tubal abscesses, not apparently tuberculous; one gangrenous gall-bladder, which was drained;

* Read before the Western Surgical Association at Omaha, Nebraska, Dec. 14, 1918.

Case No.	Pathological condition	Operation, etc.	Result
Case 1 Rec. 119	Tubo-ov. abscess, 2 oz.	Glass drain; fist. closed in 3 mos.; only gas.	Fist. closed Recovered
Case 2 Rec. 125	Ov. abscess; not removed	Inflm. openg. sut'd.	Died on 3d day
Case 3 Rec. 147	Ov. abscess, 3 oz., connecting with Intestines.	Inflm. openg. sut'd.	Fist. closed Recovered
Case 4 Rec. 152	Ov. abscess; 8 oz.; thick pus	Inflm. openg. sut'd.	Fist. closed Recovered
Case 5 Rec. 164	Ov. abscess; 16 oz. pus.	Sac sut'd in wound, fecal disch.; Operated on by another physician.	Died
Case 6 Rec. 213	Tuber. salping., opening into rectum.	Rectum sut'd; leaked.	Died 2d day.
Case 7 Rec. 353	Rt. ov. cyst., 28 lb.	Sig. torn from its mesentery; end-to-end union with Murphy button; fecal fist. closed in two months.	Fist. closed Recovered
Case 8 Rec. 376	Double tubo-ov. abscess.	Appendages removed; glass-tube drain; fecal fist. closed in 5 weeks.	Fist. closed Recovered
Case 9 Rec. 378	Double tubo-ov. abscess; 16 oz. pus.	Appendages removed; glass-tube drain; fist. closed in 3 weeks.	Fist. closed Recovered
Case 10 Rec. 405	Ov. fist. leading to fecal abscess.	Murphy button; fist. not closed.	Recovered.
Case 11 Rec. 466	Double supt. ov. dermoids.	Appg. removed; glass-tube drain; fist. 4th day; closed 18th day.	Fist. closed Recovered
Case 12 Rec. 485	Intestinal fist. 1 yr. after laparotomy due to silk ligature.	Lig. removed; fist. closed.	Fist. closed Recovered
Case 13 Rec. 592	Resection of intestine.	Fecal pelv. abscess.	Died.
Case 14 Rec. 647	Appd. abscess discharging in flank and thigh	Track explored; fist. in groin discharging feces.	Recovered.
Case 15 Rec. 652	Tuber. salping.	Appendg. removed; gauze drain; fecal fist. 4th day; closed in three weeks.	Fist. closed Recovered
Case 16 Rec. 657	Appd.; abscess 4th day	Gauze drain; fecal fist. 2d day; did not close	Recovered.
Case 17 Rec. 686	Tuber. perit. and salping.	Appendage removed; glass drain; fist. 3d day.	Recovered.
Case 18 Rec. 717	Obst. of bowels.	Resect. 5 in. of intestine; Murphy's button.	Died.
Case 19 Rec. 762	Tuber. perit. and fecal abscess.	Tube drain; fist. closed in 3 mos.	Fist. closed Recovered
Case 20 Rec. 799	Ov. abscess opening in coil of ileum	Rt. ovary removed, and opening closed.	Fist. closed Recovered
Case 21 Rec. 946	Tuber. fist. between tube and intestines.	Fecal abscess; vag. sect.; tube drain; fist. disch. through tube.	Recovered 2 mos. later
Case 22 Rec. 991	Tuber. perit. and also mixed infection.	Later fecal fist. died of exhaustion end of 3 weeks.	Died.
Case 23 Rec. 1360	Ov. abscess, 8 oz. pus.	Gauze and vag. drain; fecal fist. closed 3 weeks.	Fist. closed Recovered
Case 24 Rec. 1362	Appd. abscess, first drained 6 weeks ago.	Append. removed; gauze sponge left; fecal fist. closed in 5 weeks.	Fist. closed Recovered
Case 25 Rec. 1378	Tuber. fist.	Resect. of small intest. end-to-end suture; enema next day came back through wound.	Died of septic tuber. peritonitis.
Case 26 Rec. 1418	Tubo-ov. abscess; 3 oz. pus.	Hyster. both tubes; obst. 4th day; small intest. opened and drained.	Fist. closed Recovered
Case 27 Rec. 1464	Intest. los'd; original band divided.	Intestine resected.	Fist. closed Recovered
Case 28 Rec. 1491	Tubo-ov. abscess; large-sized gauze drain	Post-mortem opening; found tube; rectum leaked.	Died.
Case 29 Rec. 1468	Append. abscess.	Opened and drained; explored under liver; fecal fist.; post-mortem; 1 oz. pus in pelvis; lived 1 mo.	Died.
Case 30 Rec. 1522	Intest. gang. 6 inches small intestine; laparotomy 8 yrs. before.	Resection; end-to-end suture; fecal fist.	Fist. closed Recovered
Case 31 Rec. 1569	Rt. ov. abscess, opening into ileum.	Removed abscess; resect 10 in. of ileum; end-to-end suture.	Fist. closed Recovered
Case 32 Rec. 1673	Tuber. ov. abscess, opening into ileum.	Removed abscess and 10 in. of intest.; gained 60 lbs.	Fist. closed Recovered
Case 33 Rec. 1747	Append. abscess; fist. vag. drain.	3 days later lap.; another abscess opened and drained; fecal fist. closed in 3 weeks.	Fist. closed Recovered
Case 34 Rec. 1750	Ov. cyst; twist'd pedicle.	Opened; drained; 7th day fecal fist.; closed in 6 weeks.	Fist. closed Recovered
Case 35 Rec. 2110	Prostatic obstr.; perineal abscess removed.	Rectum opened and stitched up; closed at end of 1 yr.	Fist. closed Recovered
Case 36 Rec. 2363	Tuber. appendix.	Abscess opened and drained; fecal fist. 4th day; died in 2 mos. of exhaustion.	Died.
Case 37 Rec. 2799	Append. abscess.	Abscess opened and drained; alumin. tube; fecal fist.	Fist. closed Recovered
Case 38 Rec. 2853	Fecal fist. 15 yrs. after operation; three previous attempts closure failure.	Intest. edges loosened up and sutured; cured.	Fist. closed Recovered

Case No.	Pathological condition	Operation, etc.	Result
Case 39 Rec. 3003	Append. abscess; 4 in. of ileum; 6 in. of cecum; 2 in. of ureter.	End-to-end anastomosis; fecal fist. closed in 4 mos.	Fist. closed Recovered
Case 40 Rec. 3049	Append. abscess.	Tube drain through groin and back; fecal fist.; closed in 3 weeks.	Fist. closed Recovered
Case 41 Rec. 3259	Ov. abscess. (Tuber. ?)	Ovariectomy; intest. loosened and up sutured; fecal fist. closed in 4 weeks.	Fist. closed Recovered
Case 42 Rec. 3349	Append. abscess; fecal fist. drained.	Append. fist. would not close.	Recovered.
Case 43 Rec. 3401	Gangrenous perforated gall-bladder; drained.	Fecal fist. closed in 3 mos.	Fist. closed Recovered
Case 44 Rec. 3417	Carcinoma of ovary; removed 4 mos. before with cautery and curet.	Fecal fist. closed in 10 days.	Fist. closed Recovered
Case 45 Rec. 3486	Tuber. abs. fist. open'g. into sigmoid.	Appendage removed; fist. sutured; gained 10 lbs. in 3 mos.	Fist. closed Recovered
Case 46 Rec. 3498	Append. abscess; 6 mos. later intestinal obst.	Band divi.; 2 days later intest. opened and drained; fecal fist.	Fist. closed Recovered
Case 47 Rec. 5510	Fecal fistula.	Three weeks later; intest. loosened up and packed with gauze and sutured; closed.	Fist. closed Recovered
Case 48 Rec. 3554	Fecal fist. about stump of append.	Intest. loosened up and sutured; closed.	Fist. closed Recovered
Case 49 Rec. 3560	Tuber. multiple fist.	No improvement.	Died.
Case 50 Rec. 3578	Appd. abs. with obstruction.	Intest. opened wide; intest. resected; fist. left open; closed in 2 mos.	Fist. closed Recovered
Case 51 Rec. 3601	Double salping. Small sponge left in abdomen.	Removed from wound on 7th day; fecal fist. closed 6 weeks.	Fist. closed Recovered
Case 52 Rec. 3620	Append. abs. drained; fist.	Append. removed 3 weeks later and intest'l open'g. closed; septic perit.	Died.
Case 53 Rec. 3847	Append. abs. 7 weeks ago; fecal fist. ever since; also fistula between append. and cecum.	Appendix removed and fist. closed.	Fist. closed Recovered
Case 54 Rec. 3869	Rt. ov. abs. opened into intestine	Ov. removed; intestine sutured; very sick for 2 weeks.	Fist. closed Recovered
Case 55 Rec. 3986	Acute append. perfor. 48 hours before.	3d day rec't sect; 4th day fecal fistula; slow convalescence.	Fist. closed Recovered
Case 56 Rec. 3997	Gen. tuber. perit. and salp.; rt. tube opening into sigmoid.	Opened later; fecal fist.; 4 mos. still open.	Recovered.
Case 57 Rec. 4133	Old tuber. fist.; connecting with sigmoid	Several cheesy masses enucleated; opened again; closed in 4 mos.	Fist. closed Recovered
Case 58 Rec. 4167	Append. abs.; fist. for past 5 yrs. to root of appendix.	Fist. closed; sphincter ani dilated; cured.	Fist. closed Recovered
Case 59 Rec. 4239	Acute adherent appendix.	Append. removed; profuse suppuration; fecal fist. soon closed.	Fist. closed Recovered
Case 60 Rec. 4270	Tubal abscess, opening into small intestines.	Tube removed; intest'l opening closed; fecal fist.; closed in 5 weeks.	Fist. closed Recovered
Case 61 Rec. 4281	Cancer cecum; perfor. abs.; 1 oz. pus.	Fecal fist. 5 mos. later; malig. fist. still open.	Recovered.
Case 62 Rec. 4376	Gen. septic perit.; perfor. appendix; gang. spot on cecum; fecal fist. formed.	Supb. stab-drain; 3 weeks; died of exhaustion.	Died.
Case 63 Rec. 4457	Large append. abs. first vag. drain.	10 day abdom. expl.; fecal fistula in 5 days closed 6 weeks.	Fist. closed Recovered
Case 64 Rec. 4515	Gen. tuber. perit.; perf. of ileum.	10 inches resected; anast. fecal fistula. Died on 5th day.	Died.
Case 65 Rec. 4224	Large append. abscess; append. removed.	Large append. abscess removed. Fecal fist. 4 days; closed in one month.	Fist. closed Recovered
Case 66 Rec. 4249	Cancer of transverse colon.	Resection; lat. anastom.; fecal fistula 4th day. Died on 15th day.	Died.
Case 67 Rec. 4648	Intest. obst. from adhesion.	Paul's tube. Fist. opened three weeks; closed.	Fist. closed Recovered
Case 68 Rec. 4702	Tuber. abs. of append; operated on in country hospital.	Append. removed. Tube-drain; tube in too long; fecal fist.; died on 15th day.	Died.
Case 69 Rec. 4728	Ov. abscess; opening into the sigmoid and discharge on surface.	Fistula and abs. removed. Intest. sutured. Cured.	Fist. closed Recovered
Case 70 Rec. 4804	Acute append.	Appendix removed; intest. obstruct. 18th day; Paul's tube. Died of exhaustion 18th day.	Died.
Case 71 Rec. 4851	Volvulus of cecum; Paul's tube 3 mos. ago	Fist. loosened up; gauze packed; not removed. Cured.	Fist. closed Recovered
Case 72 Rec. 4854	Acute append. opening into coil of small intestine.	Append. and suture of intest.	Fist. closed Recovered

Case No.	Pathological condition	Operation, etc.	Result
Case 73 Rec. 4868	Tuber. append. pulmo. and periton.	Fecal fist. 5th week. Died of exhaustion 6 weeks later.	Died.
Case 74 Rec. 4903	Uterine displacement; obst. of bowels; drain.	Large fecal fist.; packed with gauze; closed. Cured.	Fist. closed Recovered
Case 75 Rec. 4905	Gang. append.; obst. ileosigmoid.	Fecal fistula packed with gauze.	Fist. closed Recovered
Case 76 Rec. 2813	Append. absce.; tuber. (?)	Append. removed; large fecal fistula; closed in six weeks.	Fist. closed Recovered
Case 77 Rec. 4994	Fecal fist. for past 5 mos.	Fecal fist. in sigmoid; fist. in small intest. still disch.	Recovered.

and one fistula following a perineal prostatectomy some ten years ago.

"Nature's mode of cure in any intraperitoneal collection of pus is to cause a discharge of the abscess into the intestine," says Maurice Richardson. When the surgeon steps in and interferes with nature, he may come in just as the curative process is almost complete; and as nature cannot stop, the fistulous opening shows itself in a few days. Or, again, the drainage-tube may cause, and often has caused, a fecal fistula in several of our earlier cases. The glass tube of thirty years ago was a frequent offender; next came the fenestrated aluminum tube, which was almost as bad. When it came to removing the fenestrated



Bulldog forceps, with points lodged in the appendix; found in the intestine after passing from the abdominal cavity.

metal tube, and it was found that the omentum had filled its fenestræ so that it necessitated a general anæsthetic to get it out and replace the omentum in the fistula, this was given up. Later followed the split-rubber tube, to be followed by a catheter on the third day. The method used today is usually a cigarette rubber drain, used without any gauze.

In regard to the closure of fecal fistule: We find that of all the cases, if they lived and the fistula had a chance to close, that 80 per cent closed of themselves without any treatment, and nine-tenths closed in a period of time not exceeding six weeks; one or two went over six months, but closed entirely without treatment. Any fistula that stays open two months will probably need further surgical help.

I have heard the statement made that a tuberculous fistula cannot be closed. I find that we

have closed five tuberculous fistule at the first operative treatment. The great number of our cases have not been associated with a spur. The clamping of a spur in an artificial fecal fistula is, usually, a simple procedure, and, if the two limbs of the intestine have been stitched together at the primary operation, is almost without danger and is uniformly successful.

Mr. Arthur E. Edmund's very ingenious clamp applied at the same time with Paul's tubes, drains the intestine, and is especially applicable to small intestinal obstruction when it is necessary to make a temporary fistula.

In closing a fecal fistula by suture, just as in urinary fistula of the bladder, and as in all plastic surgery, the *great point* is to loosen up the tissues sufficiently so that there will be no tension. The free peritoneal cavity may be opened if necessary, and the suture placed longitudinally, rather than transversely, especially if the opening is a large one, so as not to constrict the bowel.

For several years it has been our practice in suturing large fistule to paint the surrounding surface thoroughly with iodine, and then to pack the intestine lightly with gauze (just enough to keep back the fecal matter), leaving the gauze in place and not removing it after the stitches have been put in. The gauze is sometimes a little slow in coming through—in one case as late as the tenth day, but without any obstructive symptoms.

Many years ago, about 25, one of our patients was very sick on the tenth day after a laparotomy. On the twelfth day she passed from the anus a moderate-sized gauze sponge, which had been left by mistake in the peritoneal cavity. If nature can pass a sponge in this way out of the general peritoneal cavity, she certainly can pass one down the normal intestinal canal. Someone may say, How do you know that the sponge passed through the bowel wall? Because in another case, which was reported several years ago before the American Medical Association, I showed a moderate-sized bulldog forceps, which had been left in the abdominal cavity, and passed without much disturbance entirely into the intestine, but could not be expelled because its

point had caught in the appendix; the mid-portion of the shaft was entirely inside the ileum, and the handles were entirely inside the cecum. There were almost no adhesions, except of the two involved coils and a generous wisp of omentum covering the points where perforations had taken place in the passage of the forceps into the intestine. Removal of the forceps with the appendix, and suturing of the intestine were not followed by even a fecal fistula. This woman lived for over ten years as a monument of great surgical resistance.

DISCUSSION

DR. E. M. SALA (Rock Island, Ill.): I wish to relate one case which is not exactly a hernia, but following a laparotomy for pus, where we used wide-open drainage, a fistula developed and persisted for six months. This patient returned six months later to be operated on, but before the operation was done he had a severe coughing spell and forced out a loop of bowel. The attending physician succeeded in getting it back, and the fistula afterwards remained closed.

DR. CLIFFORD U. COLLINS (Peoria, Ill.): I was glad to hear Dr. MacLaren say that 80 per cent of these fistulae recover without operation. About twenty years ago, when I first began surgical work, I opened a pelvic abscess through the vagina, and the operation was followed twenty-four hours later by a fecal fistula. I was young in the work and was much disturbed as to what to do. I wrote eight or ten of my surgical friends to know what to do under the circumstances. I received several courteous replies, one of them asking how in the world in opening a pelvic abscess I cut a loop of bowel while doing it; but Dr. E. C. Dudley, of Chicago, wrote me a kind, fatherly letter, and told me that I would find in a book of his on a certain page a history of a similar case, and he also gave me the comforting advice that this fistula would undoubtedly close within four weeks without any further trouble. His prognosis was correct, and it did close. I never forgot his kindness in the letter he wrote me.

I think rather more than 80 per cent of these fistulae close without any further trouble. It is true that, if they persist longer than two or three months, an operation for closure is required. Only once have I found it necessary to operate for the closure of a fistula in which a loop of bowel was caught close to the abdominal wall and lined with mucous membrane, and that required closure. In a fecal fistula following an appendectomy which persisted I finally operated, and found a hard cicatricial ring around the opening in the bowel, which required excision of that ring and the closure of the bowel.

DR. A. W. ABBOTT (Minneapolis, Minn.): Among the most important fistulae that occur are not those that open outside the abdominal wall, but those that open into some viscus, more commonly the bladder. Those are the most difficult to manage.

It is a curious fact that, in several of the cases I have observed, the contents of the intestine tend to flow into the viscus, and not vice versa. The bladder will retain its urine. In a recent case, the patient being still in the hospital, I examined with the cystoscope, and found there was a sort of valvular closure in the bladder, which apparently prevented the urine from

flowing back into the rectum. That I have observed in several cases.

The first case I ever saw was while in a hospital in New York, and a diagnosis of the condition was made from finding meat particles in the urine. These cases, while difficult, can be cured. The condition is usually this: There is a fecal fistula, then an abscess, and an opening from the abscess into the bladder; and, if you establish free drainage of the abscess, both the fistula in the bladder and that in bowel will close.

DR. DANIEL N. EISENDRATH (Chicago, Ill.): Dr. MacLaren, in beginning his paper, spoke about the advisability and the advantages of enterostomy in cases of ileus. I believe we do occasionally save a patient from ileus by enterostomy. It is very essential to know what we mean by the word *ileus*. There are two varieties which we encounter in postoperative cases, one septic ileus and the other paralytic ileus. I have some doubt as to the efficacy of enterostomy in real cases of septic ileus. My experience has been that we only empty the loop of bowel where we create a fistulous opening, but we have very little influence upon the loops above that.

In paralytic ileus there are many non-operative resources we can employ before resorting to enterostomy.

I was very much interested in the statement that 80 per cent of these fistulae followed appendiceal abscesses. Increasing experience has shown us that we are a little less rough in handling the cecum in cases of appendiceal abscess than we have been in the past. The method which I have been using more and more in these cases, especially if the abscesses are retrocecal, as many of them are, is not to bother taking out the appendix at the tip, but to begin at the base and work towards the tip. I believe that by so doing 70 per cent of patients that would otherwise have fistulae are spared by this method.

A second factor in the production of fistulae in appendicitis is in using rubber drainage-tubes, which invariably cause pressure necrosis. We should employ rubber dam in the form of the Penrose wicking.

In regard to tuberculous fistulae, I have had great success in closing them by the use of the x-ray, applying deep therapy, which has greatly hastened their healing.

DR. MACLAREN (closing): I do not think we have had a fecal fistula following an ordinary laparotomy in the last five or six years; most of the cases I have been reporting are old cases which date back a long time.

Dr. Eisendrath misunderstood me when he thought I said 80 per cent of these fistulae followed appendiceal abscess. Twenty-seven, or practically one-third of the cases, were associated with appendiceal abscesses; about an equal number followed operations on ovarian abscesses; and the rest were scattering. Our experience with the cross-muscle incision in acute appendiceal abscess is that we have had two intense phlegmonous infections of the whole abdominal wall, in one case extending to the back; and both of these patients died. After that we gave up the cross-muscle incision in acute cases. An incision through which you strip up and open the fascial planes is more dangerous in these bad appendiceal-abscess cases than a straight clean incision, and the establishment of drainage after the manner recommended by Van Buren Knott, namely, to drain through a suprapubic stab, is better, in my judgment, than to drain through a cross-muscle incision.

THE PART THE X-RAY PLAYS IN THE TREATMENT OF CANCER*

BY ROBERT B. ARMSTRONG, M. D.

SIOUX CITY, IOWA

With better apparatus, newer methods, and improved technic the x-ray has become a more potent factor in the treatment of one of the deadliest diseases we are called upon to combat, namely, cancer. No disease, not even tuberculosis, is more feared by the laity, nor more respected by the medical profession.

Very often the disease is well advanced before the patient consults a physician, or before the condition is diagnosed. When diagnosed early, before metastasis has taken place, and when in an accessible region, thorough removal by surgical means is primarily indicated. Even after a thoroughly painstaking operation, however, there is no assurance that there will not be a recurrence or symptoms of metastasis.

If every case could be disposed of in the ideal manner we should feel less anxious, and more certain of our results; but often the patient will return after a time with the adjoining parts breaking down or a metastasis. Then whether an operation would only hasten the end is a problem which confronts the surgeon.

Of late years much has been done to help attain a good recovery by the use of the x-ray and radium. For a time radium was hailed as the best adjunct to surgery in these cases, but, after many long and exhaustive tests, it was found to be not very effective in the cases mostly needing radiation, namely, those situated deep in the body.

By new and improved technic and apparatus it has become possible to give the Röntgen ray in much more massive doses, and hundreds of times the former radiation. Every particle of matter penetrated by the x-rays absorbs x-rays of varying quality and quantity, becomes radioactive, and gives off minute rays itself. These are known as secondary rays.

The biological action of the x-ray must be clearly understood to permit the rational use of the x-ray in therapy. It is no longer empirical, but is based on a fairly well developed pathology. When the nature of the ray and its action on the human tissues are generally known, the x-ray can take its place in our therapeutic armamentarium to be employed, not as an experiment or as a method of last resort, but as a therapeutic agent whenever the indications arise.

The x-ray acts upon the molecular, atomic, or subatomic structure of the tissues. Such effect upon the structure of the complex protoplasmic molecules gives rise to altered metabolism, altered function, or tissue degeneration or destruction.

The results may be recognized clinically as stimulation, irritation, or loss of tissue. All cells that have absorbed x-rays undergo a chemical change, which may produce no appreciable effect, or may result in stimulation, irritation, or degeneration, the effect depending on the amount of rays absorbed by the tissues and the selective action of the ray. The lesion to be subjected to x-ray therapy must be accurately diagnosed, and the desired result determined upon. Then the dosage may be varied to bring about the desired effect. The treatment must be given in a definite manner and in no hit or miss fashion. The characteristic and unique action of the x-ray is the production of cell-degeneration, which can be demonstrated microscopically. The action is purely local, and contrary to external or even internal medication; and it reaches every cell in the irradiated area.

The selective action of the x-ray is the basis of Röntgen therapy. The normal tissues of the body may be classified according to their sensitiveness to the influence of irradiation. Those most easily influenced are said to be radiosensitive. The presence of a pathological lesion usually increases the sensitiveness of that tissue. As a rule diseased cells or tissues are more sensitive to the x-ray than healthy tissues. Abnormal cell elements are especially susceptible to irradiation. Pathological tissues composed of young, rapidly growing cells of low vitality, do not offer great resistance to the x-ray. The sarcoma, whose cells are typically embryonal, are very sensitive to the irradiation.

The principle underlying the post-operative treatment of cancer is sound, but, unfortunately, not widely enough appreciated. Considering the great number of recurrences following radical operations, even when the case is considered surgically favorable, and then recalling selective action of the x-ray upon cancer cells, it must follow that post-operative irradiation gives the patient the best chance for ultimate recovery. We do not mean the treatment of recurrences, but thor-

*Read before the Seventh District Medical Society, at Sioux Falls, S. D., December 3, 1917.

ough radiation up to saturation of the field of operation and the adjoining lymph-drainage areas as soon as possible after operation, and repetition of the same treatment two or three times during the year following.

In giving post-operative treatment it is best to use a predetermined series, which is governed by the patient's physical condition, or as such may develop during treatment. We must guard against toxemia or acidosis. It is best to give alkalis in large doses before or after massive radiation, as the breaking down of tissues may throw into the system large amounts of waste materials so rapidly that the kidneys may have difficulty in ridding the body of them. The time between treatments, too, must be carefully regulated in order that they may not come too close together. Care must be observed in the filtration of the secondary rays, and not less than three millimeters of aluminum and one-fourth inch of sole-leather used.

It is also advisable to make frequent urinalyses; also to take the blood-pressure and examine the blood occasionally, or whenever it may seem necessary. When the treatments are being given the room in which the work is being done must be carefully ventilated. To make this effective, it is often a good plan to use an electric fan that the air may be kept in active circulation. The windows and transoms should be left open.

There are, however, many cases where operation is not advisable. In these cases where operation is contra-indicated because of advanced age or physical condition or inaccessibility, but where something is demanded, the *x*-ray may prolong life and give comparative comfort, and may even arrest the advancement of the disease.

Not every case will make a brilliant recovery when the condition is well advanced, but the favorable results, from a patient's standpoint, where he is eased up for a time and not subjected to a useless and extensive operation, are enough incentive to give it a trial.

In deep cancers perhaps the cross-fire method is the most effective. By this method the region to be treated is pencilled off into two-inch squares. All the surrounding spaces and the remainder of the body are covered with a covering impervious to the ray. Then, in turn, the squares are treated for a predetermined time, usually five minutes. The central square is treated perpendicularly, and the others are treated at the proper angles, the target being shifted in different directions to accomplish this. Hence, with a back up

of five and about five milliamperes of current and a nine-inch spark with the filament of the tube at an eight-inch distance, it is possible to give some real radiation.

Many will say that there is a possibility of burn; but when we consider that we are attacking cancer the possibility of burn must not deter us, for we seldom hear of a person dying of an *x*-ray burn, while all cancer cases die unless we are able to arrest them.

In years gone by many unhappy results were obtained by the irrational use of the *x*-ray, but since the technic has been perfected there are no longer the number of burns that there were when patients were rayed indiscriminately. The patient must be protected with coverings impervious to the ray, and the dosage carefully regulated.

In our work we are using the Coolidge tube, an American invention by Professor Coolidge of the General Electric Co. This tube differs widely from the ordinary Röntgen ray tube. The cathode consists of a spiral of tungsten placed about three-fourths inch from a heavy tungsten target. These are mounted in an ordinary *x*-ray bulb, which is exhausted to an almost perfect vacuum. In this condition the tube permits the passage of no electric current, and, in order to render it operative, it is necessary to heat the tungsten spiral by the passage through it of an electric current of twelve volts from a storage battery. This battery, together with the rheostat, ampere-meter, and tungsten spiral forms an electric circuit. By means of a high-tension transformer there is impressed a potential of from 50,000 to 100,000 volts, when tungsten electrons from the incandescent spiral are hurled across the gap in the vacuum, striking on the target; and from the points of impact Röntgen rays are emitted. This tube permits the passage of enormous quantities of current for long periods of time, resulting in the emission of great quantities of Röntgen rays.

The penetration depends on the voltage impressed on the tube circuit, and, if this be kept constant, the penetration remains constant. There is thus placed in the hands of the röntgenologist an instrument of great power, which he must know how and when to use.

CONCLUSIONS

1. The *x*-ray is of distinct value in treatment of cancer, and especially those situated deep and where eradication by surgical means is not certain.

2. It can never wholly supplant surgery, but can and does supplement it to a valuable degree.

3. To get proper results we must employ proper technic, and have the ability to prescribe correctly the necessary dosage at the necessary time in each individual case.

4. In the Coolidge tube we have an instrument capable of great good if carefully and intelligently used.

5. The physician employing these various agents must be thoroughly familiar with the possibilities of present-day surgery, as well as be an expert in the technic, in order that his patient

may obtain the best possible results and the benefit of everything that science has to offer.

6. Let us not forget that every case of malignancy remains, for a certain length of time after its inception, a curable disease by proper surgical procedure.

7. Cases beyond surgical aid may often be relieved; offensive, sloughing lesions may be checked; and the patient may often be made more comfortable, at least until the end comes.

8. A careful check must be kept on the patient's condition to guard against toxemia and acidosis.

THE EARLY HISTORY OF MEDICINE IN MINNEAPOLIS*

By ARTHUR S. HAMILTON, M. D.

MINNEAPOLIS, MINNESOTA

IN THREE PARTS—PART III

Daily Tribune, Aug. 2, 1870 [Tuesday]: "Regular meeting this afternoon at two o'clock at the office of Drs. Hill and Lindley."

It was evidently at this meeting that Dr. Ames presented the paper above referred to. According to his statement the Society had enrolled up to that date thirty-nine members, of whom four had died and seventeen had moved away, leaving eighteen members at that time in the Society. The four who died were the following:

Dr. C. W. LeBoutillier, who was a graduate of the University of Paris, came to St. Anthony in 1854, and died in 1863. He is referred to elsewhere in this article. Dr. E. Denny Olds, who was made a member of the Society on December 17, 1855, later left Minneapolis, and went to Mexico, where he was assassinated in 1858. Dr. F. C. Lowenburg, who was a graduate of Leipzig University, came to St. Anthony in 1855, and died in 1864.

Dr. J. White, who was a graduate of the Medical College of Brunswick, Maine, came to St. Anthony in 1853, and died in 1856 at thirty-three years of age.

The list of those who had moved away is as follows, and is specially interesting as showing how widely distributed these former members of the Society had already become in 1870:

Dr. John H. Murphy, who graduated from Rush Medical College, came to St. Anthony in 1849, and practiced here until the breaking out of the war. After the close of the war he took up

his residence in St. Paul, where he still resided. Dr. J. W. Wheelock had moved to and then resided in Clearwater, Minnesota. Dr. Charles L. Anderson came to the city in 1853, and in 1861 moved to Carson City, Nevada, where he remained two or three years. In 1870 he was residing in Santa Cruz, California. Dr. J. Wilkin had remained in Minneapolis but a short time, and his address in 1870 was unknown. Dr. W. H. Gould lived for many years in St. Anthony, and practiced dentistry. In 1870 he resided in Boston, Mass. Dr. M. R. Greely came to Minneapolis in 1857, and was at this time residing at South Weymouth, Mass. Dr. D. C. Ayres remained about two years. His address in 1870 was not given. Dr. Henry Gilbert remained in Minneapolis about one year, and in 1870 was living in Brooklyn, N. Y. Dr. R. H. Ward was in Minneapolis but a short time, and devoted his attention to microscopy. He was then residing in Troy, N. Y. Dr. Albert A. Ames was a graduate of Rush Medical College, and practiced medicine in the city about three years, and was later surgeon in the Seventh Regiment. He left for California in 1868, and in 1870 was living in Portland and was editor of the *Portland Daily Bulletin*. Dr. A. Judson Grey was in the city one year, and in 1870 was residing in Providence, R. I. Dr. J. J. Bowen was living at LaGrange, Indiana. Dr. H. A. DuBois was an active member of the Society about one year. In 1870 he was practicing in San Rafael, California. Dr. C. J. DuBois was a member of the Society for a short time,

*President's Address before the Hennepin County Medical Society, at its Annual Meeting, January 7, 1918.

and in 1870 was living in the Island of Capri. Dr. John H. Churchill came to St. Anthony for his health, and later removed to New York City, where he resided in 1870. Dr. Edward A. Barden remained for a time in Minneapolis, but moved later to Alexandria, where he resided in 1870. Dr. James A. Baldwin remained in the cities but a short time, and then moved to Kansas City, where he was practicing in 1870.

Toward the conclusion of his article, Dr. Ames writes as follows, evidently referring to himself: "One is here today who saw this locality in its infancy; then it was listening to the voice of praise of the great organ of nature. That member took an active part in the organization of this Society, and has given to it aid and support since it was formed. He will soon go out and you will write up his record."

The above appears a very modest statement to be made by one who had founded the Society, and had served it so long and so prominently. At some time previous to the death of Dr. Ames, at the request of his children, he wrote his biography in a little booklet, which is still in the keeping of Mrs. Ames. In looking through this book it is notable that Dr. Ames refers infrequently and very briefly to his medical experiences, but apparently took great pride in his relation to the Masonic Brotherhood, to the founding of the Horticultural Society, and to the political offices which he had held. Probably he assumed that his very great interest in medical matters would be taken for granted.

Daily Tribune, Jan. 31, 1871: "A special meeting of Hennepin County Medical Society will be held this evening at the office of Drs. Goodrich and Kimball. A full attendance is requested."

Daily Tribune, March 7, 1871: "Hennepin County Medical Society meets this evening at the office of J. J. Linn, Johnston's Block, at seven p. m."

Daily Tribune, June 7, 1871: "The annual meeting of Hennepin County Medical Society held at two o'clock at the office of Dr. Linn. The president being absent, Dr. Linn was asked to preside. The following officers were elected: President, Dr. A. E. Ames, re-elected; Vice-President, N. B. Hill; Secy. W. F. Hutchinson, re-elected; Treas. O. J. Evans.

"A committee reported that they had engaged the Pythian Hall for the session of the State Medical Society, which convenes in this city June 13th.

"It was decided to tender the State Society a grand banquet on the evening of the 13th and

Dr. Ames tendered the use of his residence and grounds for such purpose. After some discussion, dancing, cards and wine were tabooed at the banquet, which, nevertheless, will be gotten up on a most extensive scale.

"The following committee of arrangements will have charge of the affair: Mrs. A. E. Ames, C. G. Goodrich, W. F. Hutchinson, H. H. Kimball, Geo. H. Keith, A. H. Lindley, Miss Maria Hill, Miss Nellie Goodrich. There were no new members admitted at this meeting. The Society adjourned for two weeks."

Daily Tribune, June 14, 1871: "The following Minneapolis men responded at the State Medical Society to the roll call: Ames, Evans, Goodrich, Hill, Keith, Kimball, Lindley, Linn, Hutchinson, Phillips. A. A. Ames, now one of the editors of *Alta*, San Francisco, California, was made an honorary member.

"A banquet was held at the residence of Dr. A. E. Ames, corner Fourth and Ames Street, at six o'clock. The members of the Society were again assembled, together with the mayor and ex-mayors of the city and other invited guests to be for a short time the guests of the war-worn medical veteran, Dr. A. E. Ames. The doctor and his estimable wife received the guests, who were distributed through the parlors and reception rooms of the mansion and about the grounds as their fancy dictated. A banquet of everything that was good to delight the wants of the inner man was provided and partaken of with a zest which proved that long years of study and experience had enabled most of the company to become experts in the analyzation of the viands provided for their manipulation. Music from a string band and from several of the company present served to enlighten the spirits of the visitors, who remained several hours, and were at last loth to leave such a scene of welcome and beauty. Nothing was left undone that could add to the enjoyment of the party.

"This morning, on invitation of Col. King, many of the physicians will visit Lyndale Farm. Most of the party who desire to go will start as early as six o'clock, intending to return in ample time for the morning session."

Daily Tribune, Wednesday, June 3, 1872: "The annual meeting of the Hennepin County Medical Society was held yesterday at the office of Dr. A. E. Ames, when the following business was transacted: Dr. A. E. Johnson (East Division) was elected to membership. The following officers were then elected for the ensuing year: Pres., A. E. Ames; Vice-Pres., N. B. Hill; Sec.,

O. J. Evans; Treas., Geo. B. Johnston. The president then appointed the following standing committees: Ethics—C. G. Goodrich, Geo. H. Keith, W. H. Rouse. Membership—Kimball, Lindley, Phillips. The following were elected delegates to the semi-annual State Medical Society, which meets at Rochester, January 11th: J. J. Linn, Rouse, Goodrich."

Daily Tribune, June 6, 1873: "The regular meeting for the election of officers of Hennepin County Medical Society will be held in Dr. Linn's office, Johnston's Block, this evening."

Daily Tribune, Saturday, June 7, 1873: "The doctors found it too hot for election work last evening and the old officers hold over till another meeting." This probably meant for another year, since no notices of election of officers could be found in the papers of August and September, though notices of meetings were found.

The Tribune Directory for 1873-74 says: "Hennepin County Medical Society was organized in 1855 and is in an interesting and satisfactory condition. Its president is the very oldest physician and surgeon now practicing in Hennepin County and a gentleman well worthy of the honor of the position. Meetings are held every two weeks at the office of one of the members. Officers are: A. E. Ames, Pres.; N. B. Hill, Vice-Pres.; Geo. B. Johnston, Treas.; O. J. Evans, Secy."

Daily Tribune, Friday, June 6, 1874: "The Hennepin County Medical Society met at Dr. Ames' office and after reading the minutes of the last meeting elected Drs. Salisbury and Bedford as members of the Society, after which the election of officers took place. Dr. A. E. Ames was unanimously elected president; Dr. Charles Simpson, vice-president; Dr. C. C. Clarke, secretary, and Dr. Bedford, treasurer. Committee on Ethics—Goodrich, Lindley, Johnson. Membership—Linn, Rogers, Phillips. Printing—Smith, Salisbury and Ortman.

"Then followed an essay by Dr. Simpson, which elicited an animated discussion, in which all the members participated. Dr. Phillips was appointed essayist for the next meeting on the subject of neuralgia and Dr. Goodrich for the following meeting; subject, Ergot. The meeting was enthusiastic and attendance large. The Society will continue these essays every two weeks. Next meeting at Dr. Salisbury's office two weeks from last night."

Campbell and Davison's Directory gives a list of officers for the year differing decidedly from this, and being practically identical with those

of the year before. Here is the list: A. E. Ames, president; N. B. Hill, vice-president; O. J. Evans, secretary.

Dr. A. E. Ames died on September 23 of this year, and the following history of his life is taken partly from a contemporary account in the *Tribune* and partly from Minnesota Biographies:

Dr. A. E. Ames was born in Colchester, Vermont, in 1814. His parents were poor and as a child he was so sickly that he was not expected to grow up. Later the family moved to Orwell, Ohio, and in the common schools of these two places he acquired his education. While teaching in 1834 he met Miss Martha Pratt, whom he married in 1836, and a month after his marriage he went to Chicago, then a town of 3,000, mostly halfbreeds. From there he followed the Indian trail west to a place later called Amesville, now Garden Prairie. Here he took a claim of 160 acres, and built a log house. In April, 1837, he returned to Chicago, and worked for \$52 a month at brick-making. On November 25, 1838, he walked to Vandalia, then the capital of Illinois, and was there introduced to Alex. Field, Secretary of State, by Stephen A. Douglas, and was appointed Deputy Secretary of State and also private Secretary to Governor Carlin; and in these positions he earned \$6 a day. In 1839 he was again Deputy Secretary of State, Secretary to the Governor, and chief of the staff of clerks, earning thus \$10 a day.

In 1840 he began to attend medical lectures at Rush, and in 1841 he studied with Dr. Maloney of Belvidere. At this time he was in very poor health. He was elected a member of the House of Representatives of Illinois in 1842. In March, 1843, he was made postmaster at Belvidere. In July of 1844, he resigned and moved to Roscoe, Illinois, where he began the practice of medicine, and was made postmaster December 16. In February, 1845, he graduated from Rush. In 1849 he was elected State Senator, and made paymaster general on the Governor's staff. He started three Masonic lodges in Rockton, Roscoe, and Rockford, Illinois. In October, 1851, he left Roscoe for St. Anthony, going by wagon from Roscoe to Galena, thence by the famous Dr. Franklin No. 1 to St. Paul. He secured a permit to make a claim on the Reserve, now Minneapolis, and in November '51 built his claim cabin on the lot now occupied by the Court House. Immediately following his arrival he entered into a partnership with Dr. Murphy of St. Anthony. In the spring of 1852 he brought his family from Illinois. The same year he was made surgeon at

Fort Snelling and in October was elected to the territorial legislature. October 10, 1854, he was made probate judge. In January, 1856, he was appointed postmaster. In 1857 he was chairman of the committee on school lands and university, and in 1860 was a member of the State Normal school board, serving during the organization of that system. In 1861-62 he delivered a course of lectures before the high school of Minneapolis on anatomy and hygiene, being thus, doubtless, the first to give public instruction in Minnesota on a medical subject. In 1862 he went east to visit the hospitals. In 1868 he again went east, and then to California, where he had some idea of remaining, offering his home and property here for sale, but returned. "He was always actively interested in all educational matters. In fact, he was never idle and scarcely ever allowed to remain in private life. He was a member and almost always a leader in the medical society." This is almost the only reference in the above accounts to his medical life, though, curiously enough, he was probably president of Hennepin County Medical Society practically continuously from its inception in 1855 to his death in 1874, almost twenty years.

Dr. Ames was a member of the American Medical Association, had been President of the Alumni of Rush Medical College, and was much devoted to his profession, to which he had given many years of hard labor. In a memorial notice of him given in the Transactions of the Minnesota State Medical Society for 1875, Dr. O. J. Evans says of him: "The most prominent probably of Dr. Ames' characteristics was that most commendable of all the graces—charity. During an acquaintance of nine years, I think I never heard him speak an ill word of any person."

On February 5, 1875, occurred the death of Dr. Nathan B. Hill, who, though not one of the founders of Hennepin County Medical Society, was one of its earliest and most influential members. Dr. Hill was born in Randolph County, North Carolina, on May 13, 1817. After graduating from Haverford College, near Philadelphia, he entered mercantile life with his father, but later decided to enter medicine, and attended Jefferson Medical College during the session of 1842-43. In May, 1845, he was married, and in the winter of 1847-48 moved to Cincinnati, where he attended lectures at Ohio Medical College and graduated in 1848, after which he returned to North Carolina and practiced till 1861. He was a strong antislavery man, and was interested in the underground route for the freeing of slaves,

to the great detriment of his practice and danger of his life. In May, 1861, in company with Dr. Lindley, he came overland to Indiana, crossing the Ohio River at Louisville, and in September came to Minneapolis, where he and Dr. Lindley formed a partnership, which continued to the death of Dr. Hill. At the time of his death he was president of the State Medical Society, the annual meeting of which he had called to order but a few hours before his death. His address was read by Dr. Hewitt. Dr. Hill was a devout member of the Society of Friends, and was a man of fine susceptibilities, generous impulses, and of the utmost integrity, and with his natural ability, his superior education and kindly ways, he became a very prominent physician in this community.

There are many others among the older physicians of whom special mention might be made did the limits of this paper permit, but it will not be considered an invidious distinction, I think, if I refer particularly to the following:

Dr. Lindley was born in North Carolina in 1821, and came to Minneapolis in 1861. He was a well educated, reliable, conscientious, and successful physician, prominent in the sanitary interests of the city and its first health officer. As a result of judicious investments he became very wealthy and died in Minneapolis at the advanced age of nearly eighty-four years.

Dr. Ortman located in St. Anthony in 1857, was later active as a city and county physician and was one of the oldest members of the State Medical Society, of which he was made an honorary member without dues. He was a very excellent man, notable for his high ethical standards and kindly disposition. Owing to the development of cataracts, he became blind several years before his death.

Dr. C. G. Goodrich came to Minneapolis in 1868, and at once entered on an extensive practice. He was wealthy when he came, and invested largely in real estate. He was a modest, truthful, faithful, and generous man, and was the first elected president of Hennepin County Medical Society following the death of Dr. Ames.

Daily Tribune, June 5, 1875: "The fifth annual meeting of Hennepin Society was held at the office of Dr. Evans in his new block on Bridge Square last evening. Nearly all the members were in attendance, the meeting being particularly important and peculiarly interesting. Drs. R. J. Hill and S. H. Lindley were duly elected and installed members, after which the election of the officers for the ensuing year took

place. The following was the result: Pres., C. G. Goodrich; Vice-Pres., O. J. Evans; Sec., A. S. Salisbury; Treas., W. C. Bedford. At the close of the election Dr. Simpson, the retiring president, made a few apt and timely remarks, as did also Dr. Evans, who, in the absence of the president in the east getting married, acted as presiding officer.

"The fee bill for the Society was discussed and slightly amended, among other changes it being resolved to charge an invariable fee of \$25 for holding a post-mortem examination.

"Dr. Clark was appointed essayist for the next meeting and Dr. Simpson for the one following, after which the meeting adjourned.

"Immediately after the adjournment, the members of the Society were invited to partake of a sumptuous repast prepared by Dr. and Mrs. Evans. The collation was served in an adjoining room and the members of the fraternity did justice to the occasion, even ignoring the laws of health and the rule prescribed (for others) relative to eating late and hearty meals. After rising from the festive board a series of resolutions were adopted expressing the thanks of the Society to Dr. and Mrs. Evans, after which the members congratulated themselves upon the pleasant occasion and then adjourned."

The above note on post-mortems may have some connection with the following very unpleasant article which had appeared in the *Tribune* of December 3, 1872: "The Minneapolis Post-Mortem Club.—The Club met today pursuant to adjournment, Dr. A. S. S. Jones in the chair. Dr. D. M. Phule, Secretary, read the minutes of the last post-mortem. Committee on Mortality reported two deaths since last meeting.

"Dr. L. M. Some introduced the following resolution: That the H. O. G., this city, be instructed to notify this Club of all deaths occurring within the limits of the city.

"And, resolved that for the benefit of science this Club shall immediately take possession of the bodies and post-mortem the same with as little delay as practicable, that being the only method of arriving at a correct diagnosis in any case.

"And, resolved that with the sole object of enlightening the benighted public upon scientific medicine, the proceedings of this Club be published in the daily papers in case they do so gratuitously. * * *

"Gentlemen, you befog your own brains. Every post-mortem made by this Club since the organization has ventilated your own ignorance. The people ask for a little more knowledge of disease

before death and fewer post-mortems; for less advertising and less braggadocio and more careful, earnest practice. The disgusting frequency of post-mortems in this city is a disgrace to the profession, which the people will ere long rebuke."

It was about this time that Dr. Tanner, an herb doctor of Minneapolis, acquired widespread notoriety through his fasting demonstration, which appears to have been an advertising scheme carried on in Market Hall at Hennepin and First Avenue South. I have not located the exact date or description of Tanner's activities. After the close of his fasting exhibition he went on the lecture platform, and seems to have disappeared from Minneapolis.

Daily Tribune, Monday, June 4, 1877: "Meeting of Hennepin County Medical Society at the office of Drs. Goodrich and Murray Monday evening."

I looked diligently in the papers of Tuesday and the following days, but could find no report.

Davison's City Directory, 1880-81: Pres., O. J. Evans; Treas., Dr. Miller; Sec., Dr. Fairbairn.

Davison's Directory, 1882-83: Pres., Chas. Simpson; Treas., Dr. Miller; Sec., M. Spring.

The *Tribune* of June 5, 1883, says: "The annual meeting of Hennepin County Medical Society was held at Dr. Salisbury's office last night. The following officers were elected: Pres., Dr. C. L. Wells; Vice-Pres., Dr. R. J. Hill; Sec., Dr. Towers; Treas., Dr. Fairfield; Libr., Dr. Burwash. The meeting was well attended. Adjourned till first Monday in July."

Morning Tribune, June 3, 1884: "The annual meeting of Hennepin County Medical Society was held at Dr. Salisbury's office last night. The following officers elected: Pres., R. J. Hill; Vice-Pres., F. E. Towers; Sec., M. E. Woodling; Treas., E. J. Brown; Libr., A. H. Salisbury."

Minneapolis Directory, 1888-89: "Hennepin County Medical Society, Pres., E. J. Brown; Vice-Pres., W. J. Byrnes; Treas., E. J. Spratt; Sec., J. W. McDonald."

1893-94 Davison's Directory (Clubs, Assn's, Societies), Hennepin County Medical Society: Pres., J. W. Macdonald; Sec., A. F. Irwin. Meets first Monday of every month in Library Building.

HAHNEMANN MEDICAL SOCIETY OF HENNEPIN COUNTY

Tribune Directory, 1873-74: "The Homeopathic Society was organized a few months ago under the name of Hahnemann Medical Society

of Hennepin County. The officers are: W. H. Leonard, President; T. R. Huntington, Secretary and Treasurer. Meetings the first Friday of every month in the office of Drs. Goodwin and Flanders."

Davison's Directory, 1874: Pres., W. H. Leonard; Vice Pres., G. F. Flanders; Sec. and Treas., P. Nelson.

Campbell's Directory, 1875: Pres., P. L. Hatch; Treas. and Sec., G. F. Flanders; Censors, Goodwin and Leonard.

Campbell's and Davison's Directory, 1876: Pres., D. M. Goodwin; Treas. and Sec., P. Nelson; Censors, Goodwin and Leonard.

Campbell's and Davison's Directory, 1877-78: Officers same as before.

1878-79: Officers same as before.

1879-80: Pres., W. H. Leonard; Sec. and Treas., Miss Hutchison.

Davison's Directory, 1880-81: Pres., A. A. Camp; Treas. and Sec., S. P. Sterrett.

Davison's Directory, 1881-82: Pres., A. A. Camp; Vice-Pres., Mary L. Swain; Sec. and Treas., Adele S. Hutchison.

1882-83: Officers same as before.

With this year the lists cease in directories until 1893, when I have a record of Hennepin County Medical Society, but nothing further of the Homeopathic Society. The following note of the Homeopathic Society is from Neil's History of Hennepin County: "The Hahnemann Medical Society of Hennepin County was organized September 16, 1872, and was the result of an informal meeting of the Homeopathic physicians of the city held in Dr. W. H. Leonard's office September second of that year. A constitution and by-laws were adopted and signed by Drs. D. M. Goodwin, W. H. Leonard, G. F. Flanders, T. S. Huntington, M. H. Wallens and Petrus Nelson. Dr. Huntington died in March, 1873. * * * In May, 1880, a plan for a free dispensary was begun which resulted in the Cottage Hospital."

The latter statement would seem to have been an error, since the Cottage Hospital was opened early in March, 1871, and was due largely to the efforts and energy of Bishop Knickerbacker of the Brotherhood of Gethsemane, aided by Dr. Ames. As the Cottage Hospital was the first private hospital to be opened in the Falls Cities, a further word as to its organization and development may not be out of place. The following items are taken largely from the *Daily Tribune*:

Daily Tribune of January 22, 1871: "Through the kindness of Dr. A. E. Ames, the physician of the Brotherhood of Gethsemane, a dispensary

has been opened in Dayton's Block by the Brotherhood for supplying the deserving poor with medicine and advice gratis. We hope this is preparatory to the opening of a hospital, an institution much needed in our city."

On Friday, March 3, 1871, the *Tribune* printed an editorial on "The New City Hospital," emphasizing its need, and giving something of its history: "To come back to Minneapolis, the Brotherhood of Gethsemane, a benevolent institution, believing that the time has come when in a population like that of the two Falls cities some provision should be made for the sick and maimed destitute, have taken the first decisive steps to that end by assuming the responsibility for providing a building for the purpose and, reckoning thereafter upon the benevolent promptings of our citizens to sustain the undertaking, they ask for money and a good attendance at Dr. Ames' lecture." Then follows "The Appeal of the Brotherhood of Gethsemane in behalf of the Cottage Hospital." They had already secured a matron and received \$500 to furnish the building, rented temporarily on Washington Avenue beyond Bassett's Creek. Donations were to be sent to Messrs. Mendenhall and Westfall.

On March 7 the *Tribune* printed a letter from Rev. Knickerbacker in reference to the hospital, extending thanks, and adding: "and now permit me to say a few words about the future of such a hospital. An institution like this in a large and prosperous community like Minneapolis and St. Anthony should not be permitted to remain long in a rented and uncomfortable building. The time is not far distant when a medical faculty and a medical school must be connected with the rising University of Minnesota. A hospital is indispensable for such a school. Why shall this not grow into something of the kind? * * *

On March 9 a letter from A. E. Ames appears saying that there will be no contagious diseases admitted to the hospital as the city itself already has a pest-house outside the city limits.

The Sunday, March 19, edition of the *Tribune* gives the following items under the heading, "The New Hospital":

"The work of furnishing and preparing the hospital has been so far perfected as to admit of the reception of patients. Our citizens have responded generously to the call for aid in the enterprise. Already many useful donations of furniture and provisions have been made. Some eight beds have been provided besides a good part of the general furniture of the house. The ~~American~~ order has furnished a room comfortably . . .

employees of the Milwaukee car and machine shops a room. The Nicollet House, St. Mark's Parish, the Ladies' Aid of Gethsemane Church, the Brotherhood of Gethsemane, a lady of the Brotherhood of Gethsemane, and the millers each contributed the means to furnish a bed. The druggists have furnished a generous supply of medicine, the liquor merchants the necessary liquors, whilst several individuals have given general pledges of assistance. These will all be acknowledged in detail later. The bedding is all new and made up by the Ladies' Aid Society of Gethsemane Church. The first patient was received into the hospital on Tuesday [March 14], an orphan lad, eighteen years of age, without friends, of German parentage. He had been a newsboy on the Pacific Railroad and had been taken sick in a boarding house without means of support. He expressed great gratitude for the comforts and attention of the home. A second patient was received on Thursday [March 16]. He was a Swede who lost a leg recently on the Milwaukee Railroad and was brought from Mendota. He, too, was overjoyed to get where he could receive proper care and attention. The third patient was received on Friday, a Norwegian, taken down in a bawdy house with pneumonia. He was brought to the hospital in filth and rags and was cleaned and made comfortable.

"Thus is the hospital meeting a great want in the community. It will no doubt soon be filled. It has a capacity for four more beds, which should be furnished at once. The working men of Minneapolis will take an interest in this home and contribute liberally to its support. It is the small contributions of the many that are asked to sustain it. * * *

"The government of the hospital is entrusted to the following persons: Superintendent, Rev. D. B. Knickerbacker; matron, Mrs. Mary A. Everts; physician and surgeon, Dr. A. E. Ames, with Drs. Goodwin and Linn as consulting physicians and Drs. Hutchison and Hill as consulting surgeons; Treasurer, W. H. Chamberlain; Secretary, S. B. Cowdery; Directors, W. H. Greene, H. P. Westfall and R. J. Mendenhall. * * *

"Private patients can be accommodated and can have their own physicians visit them when they wish, as may also any beneficiaries."

The *Tribune* of April 2 contains an editorial urging a larger building, and on April 6 is found a notice of the first death in the hospital. The report of the hospital for May was as follows: Seven males and one female admitted. Four discharged, and one died. A note was made that

during Dr. Ames' absence in California, attending a medical society, Dr. Linn had discharged the duties of medical attendant to the hospital.

The *Tribune* Directory of 1874-75 gives the medical officers of the Cottage Hospital as follows: Drs. E. Phillips, A. Ortman, W. H. Leonard, and C. W. Putnam, attending and visiting physicians.

In 1876 (Campbell and Davison's Directory) the medical staff consisted of Drs. Phillips, Ortman, Leonard, and Putnam, and in 1877, Dr. A. A. Camp was added. The staff remained the same in 1878 and 1879, but in 1880 was changed to the following: Drs. Dunsmoor, Spaulding, Leonard, Putnam, and Camp. The 1881 staff comprised Drs. Dunsmoor, Wells, Abbott, Hamilton, Lawrence, Leonard, and Camp.

Until 1881 the Cottage Hospital would seem to have been the only one in Minneapolis, but in that and the following year there was a regular epidemic of hospitals, that of Dr. A. A. Ames being the second in the city. The Directory of 1882-83 contains this list of such institutions:

"Ames, A. A., Private Hospital, 4th Ave. S. and Washington.

"Cottage of the Brotherhood of Gethsemane, Cor. 9th Ave. S. and 6th St.

"Minn. College—Dr. L. C. Mitchell, Superintendent.

"Sisters of Mercy, 6th St., Cor. 25th Ave. S.

"Homeopathic—A. L. Bausman, Secretary.

In 1884 the Cottage Hospital changed its name to St. Barnabas, and the Northwestern Hospital was added to the list.

The record of the physicians of the Twin Cities taking part in the Civil War is as follows, and is complete as far as I am able to make it:

Chas. W. LeBoutillier, Assistant Surgeon to the First Regiment, Minnesota Infantry, was commissioned April 29, 1861. After the battle of Bull Run he elected to remain with the wounded in the hands of the Confederates, and was captured, and, with Dr. Stewart of St. Paul, was kept a prisoner at Richmond. His care of and kindness to the soldiers at this time were long remembered. Paroled, he returned to Minnesota, where he remained with his family until the time of the Indian outbreak, when he became surgeon of the Ninth Regiment, October 10, 1862, and went to St. Peter, where he remained on duty until his death, April 3, 1863, aged about 37, and was buried with military honors in Minneapolis.

The following notes refer to the service of Dr. Stewart and Dr. LeBoutillier:

The State Atlas, August 28, 1860: "The brave and gallant Stewart has returned after having remained with his wounded until all recovered, or nearly so, and having faithfully performed every duty which the condition of his men imposed upon him he was at liberty on his parole of honor not to engage in the war until released or exchanged. Dr. Stewart might easily have escaped had he followed the example of most of the surgeons on the field, but with his dead, dying and wounded about him he nobly remained at his post of duty. We honor and love the man for the bravery and fidelity with which he discharged his sacred trust upon that terrible field and hope he may live long to enjoy that esteem and confidence which we are sure the grateful people of the State entertain for him and others who have so nobly served them on the battle-field."

The State Atlas, September 18, 1861: "The *Pioneer* of yesterday morning contains a very interesting letter from Dr. LeBoutillier at Richmond. This letter is dated August 15 and was written by permission of General Winder, Commanding Officer at Richmond. The doctor is one of ten federal surgeons in that city who have been divided into two parties, Dr. LeBoutillier having been placed at the head of one division of five. His letter breathes the ardor of devotion which he always manifested to his favorite branch of medicine, the science of surgery, and records for the benefit of the profession some valuable testimony as the result of army practice against amputation and in favor of resection of fractured bones."

Levi Butler, surgeon to Third Regiment, Minnesota Infantry, came to Minnesota in 1855 from Indiana. He was married, and had practiced ten years before his arrival. He had a moderate fortune, and became interested in educational, moral and temperance activities. In 1861 he recruited a company of volunteers, and was made captain, and afterwards surgeon, of the Third Regiment of Minnesota Infantry, of which his company was a part. He was commissioned November 11, 1861, and went south. When his regiment surrendered at Murfreesboro he returned to assist in the suppression of the Indian outbreak. He later rejoined the service, and was in campaigns in Kentucky and Louisiana. He resigned, and came home in September, 1863. Dr. Butler was one of the large number of tuberculous patients who came to Minnesota in search of health, and it was on account of a return of his old trouble and a condition of protracted ill health that he was discharged in 1863. In the

following year he was appointed by the Governor to visit southern camps and hospitals to improve sanitary conditions and relieve the suffering of sick Minnesota volunteers. At the return of peace he did not engage in practice, but went into the lumber business. He died in 1868.

Moses R. Greeley, assistant surgeon to the Third Regiment, Minnesota Infantry, came to Minneapolis in 1857, and served during the war as assistant surgeon to the Third Minnesota Regiment of Infantry, and some time later moved to South Weymouth, Massachusetts.

John H. Murphy, surgeon to the First, Fourth and Eighth Regiments, Minnesota Infantry: In the summer of 1861, after the capture of Stewart and LeBoutillier at Bull Run, Dr. Murphy became surgeon of the First Regiment, and served in that capacity for six months. He then became surgeon of the Fourth Minnesota Infantry, connected with the Seventeenth Army Corps, with McPherson as commander. Here he served as division surgeon most of the time. In the summer of 1864 he had a sunstroke, and was obliged to come north. He then became surgeon of the Eighth Minnesota Infantry operating against the Indians and served there till the end of the war. During the latter part of this time his family was in St. Paul, which was his home after 1864.

William H. Rouse, assistant surgeon of the Eighth Regiment of Minnesota Infantry, served from September 12, 1862, to July 11, 1865.

William H. Leonard, successively assistant surgeon and surgeon to the Fifth Minnesota Regiment of Infantry, served from November 22, 1862, to September 6, 1865, and was discharged with the regiment. Dr. Leonard was born in Mansfield, Connecticut, December 2, 1825, and died in Minneapolis April 9, 1907. He was a graduate of Yale Medical School 1853, settled in Minneapolis in 1855, and died in this city April 9, 1907.

Dr. A. A. Ames, assistant surgeon of Seventh Regiment, Minnesota Infantry, graduated from Rush Medical College in February, 1862, and shortly after began practice in Minneapolis. In August, 1862, he helped to raise Company B, Ninth Minnesota Infantry, himself and brother enlisting. The same month he was commissioned assistant surgeon to the Seventh Minnesota and departed for duty on the frontier, where the Indian war was raging. In the fall of 1863 he went south and engaged in field service till the end of the war and was mustered out at Ft. Snelling August 18, 1865. In March, 1868, he went to California and engaged in newspaper

work. In September, 1874, he was summoned to the death-bed of his father and in company with Dr. Salisbury took up his father's practice. He later entered politics and through his efforts the Minnesota Soldiers' Home was founded.

H. A. DuBois "served in the army with great credit," and came subsequently to Minneapolis, and was an active member of the medical society about one year. He later moved to San Raphael, California.

O. J. Evans, surgeon to Fortieth Regiment, N. Y., volunteers, graduated from the Albany Medical College of New York, and went immediately to the front as assistant surgeon to the Fortieth New York Volunteers. The following summer he became surgeon to the regiment, and was detailed on the operating staff of the Brigade, which duty he discharged to the end of the war, when he was made Chief of the Medical Department of Farnsville, Va., where there was a cluster of Confederate hospitals filled with Union and Confederate wounded. Of these hospitals he had general supervision. He took part with his regiment in the Grand Review in 1865 in Washington, and was mustered out some time later. In September, 1865, he came to St. Peter and ten weeks later to Minneapolis, where he remained.

Dr. Edwin Phillips, assistant surgeon of the Fourth Vermont and surgeon of the Sixth Vermont Volunteers, was born in Vermont in 1833, and graduated at Ann Arbor in 1861. He returned to Vermont, and in September, 1861, enlisted in the Sixth Vermont Volunteers as a private. August 6, 1862, he was promoted to assistant surgeon of the Fourth Vermont Volunteers. October 28, 1863, he became surgeon of the Sixth Volunteers, which position he held until mustered out in July, 1865. He was probably paid off by Dr. A. W. Abbott, who was then in the paymaster's department at Burlington, Vermont. Dr. Phillips then entered the College of Physicians and Surgeons of New York and was graduated in 1866. He practiced in Fort Edward, N. Y., three years and came to Minneapolis in 1869.

D. M. Goodwin was surgeon to a Vermont Regiment (probably the Fourth) and Dr. Phillips served under him. At one time he was brigade surgeon. After the war he came to Minneapolis and practiced homeopathy. He was a prominent surgeon and is said to have had the largest practice of his time.

The following is a list of the officers of the Society so far as I have been able to learn them.

In most instances the names are taken from no-

tices published in the papers at the time of the election, and a few are taken from directories, which have not been found a very satisfactory source:

1855—President, A. E. Ames; vice-president, C. L. Anderson; secretary, Dr. Wheelock.

1862—President, A. E. Ames; secretary, R. H. Ward.

1867—President, A. E. Ames; secretary, N. B. Hill.

1868—Presidents, A. E. Ames and N. B. Hill; secretary, N. B. Hill.

1869—President, A. E. Ames; vice-president, N. B. Hill; secretary, W. F. Hitchcock.

1870—President, A. E. Ames; vice-president, N. B. Hill; secretary, Geo. H. Keith.

1871—President, A. E. Ames; vice-president, N. B. Hill; secretary, W. F. Hutchinson.

1872—President, A. E. Ames; vice-president, N. B. Hill; secretary, O. J. Evans.

1873—President, A. E. Ames; vice-president, N. B. Hill; secretary, O. J. Evans.

1874—Presidents, A. E. Ames and Chas. Simpson; vice-president, Chas. Simpson; secretary, C. C. Clarke.

1875—President, C. G. Goodrich; vice-president, O. J. Evans; secretary, A. S. Salisbury.

1877-1878—President, Edwin Phillips; vice-president, J. W. Murray; secretary, C. L. Wells.

1878-1879—President, J. W. Murray; vice-president, A. H. Salisbury; secretary, C. L. Wells.

1879-1880—President, A. H. Lindley; vice-president, O. J. Evans; secretary, C. L. Wells.

1880-1881—President, O. J. Evans; vice-president, C. L. Wells; secretary, Dr. A. C. Fairbairn.

1881-1882—President, Chas. Simpson; vice-president, Dr. A. C. Fairbairn; secretary, N. Spring.

1883-1884—President, C. L. Wells; vice-president, R. J. Hill; secretary, F. E. Towers.

1884-1885—President, R. J. Hill; vice-president, F. E. Towers; secretary, M. E. Woodling.

1885-1886—President, Woodling or Salisbury.

1888-1889—President, E. J. Brown; vice-president, W. J. Byrnes; secretary, C. J. Spratt.

1889-1890—President, W. J. Byrnes; vice-president, J. H. Stuart; secretary, G. W. Bass.

1890-1891—President, J. Harlan Stuart; vice-president, J. W. McDonald; secretary, G. W. Bass.

1891-1892—President J. Harlan Stuart; secretary, G. W. Bass.

1892-1893—President, W. A. Hall.

1893-1894—President, J. W. McDonald; secretary, A. F. Irwin.

1894-1895—President, C. G. Weston; secretary, A. F. Irwin.

1895-1896—President, W. A. Jones.

1896-1897—President, J. W. Little; secretary, J. W. Dudley.

1897-1898—President, J. C. Cockburn; secretary, W. B. Pineo.

1898-1899—President, L. A. Nippert; secretary, W. B. Pineo.

1899-1900—President, H. B. Sweetser; secretary, F. A. Knights.

1900-1901—President, A. W. Abbott; secretary, F. A. Knights.

1901-1902—President, H. L. Staples.

1902-1903—President, J. W. Bell; vice-president, F. C. Todd; secretary, F. A. Knights.

1904—President, C. H. Hunter; vice-president, W. E. Rochford; secretary, F. A. Knights.
 1905—President, D. O. Thomas; vice-president, A. B. Cates; secretary, C. H. Bradley.
 1906—President, F. C. Todd; vice-president, J. A. Crosby; secretary, C. H. Bradley.
 1907—President, J. E. Moore; vice-president, A. T. Mann; secretary, C. H. Bradley.
 1908—President, F. A. Knights; vice-president, J. G. Cross; secretary, C. H. Bradley.
 1909—President, J. D. Simpson; vice-president, J. F. Corbett; secretary, C. H. Bradley.
 1910—President, C. A. Donaldson; vice-president, C. A. Lapierre; secretary, C. H. Bradley.
 1911—President, T. F. Quinby; vice-president, H. E. Cary; secretary, C. H. Bradley.

1912—President, C. H. Bradley; vice-president, J. H. Rishmiller; secretary, E. J. Huenekens.
 1913—President, H. H. Kimball; vice-president, Geo. D. Haggard; secretary, E. J. Huenekens.
 1914—President, C. A. McCollom; vice-president, Robert Williams; secretaries, E. J. Huenekens and C. N. Brooks.
 1915—President, R. E. Farr; vice-president, J. G. Cross; secretary, S. R. Maxeiner.
 1916—President, J. G. Cross; vice-president, A. S. Hamilton; secretary, S. R. Maxeiner.
 1917—President, A. S. Hamilton; vice-president, J. C. Litzenberg; secretaries, S. R. Maxeiner, R. T. La Vake and C. W. Pettit.

HOSPITAL DEPARTMENT

CONDUCTED BY G. W. OLSON

Superintendent of the Swedish Hospital, Minneapolis

INTRODUCTION

In opening a department designed to be of special interest to hospitals and hospital workers, *THE JOURNAL-LANCET* recognizes the importance of the hospital as an aid to the physician in the practical application of his science and skill. The hospital of today, however, is not merely a physician's or surgeon's workshop, but a highly organized community inhabited by the sick and their necessary attendants. In such a community we find the essential features of the home, the hotel, the various trades and industries necessary to the maintenance of the domestic establishment, and, in addition, a completely organized school giving instruction and training to those who are to care for the sick. Many of the problems connected with the government of such a community have received little or no attention in the training of the physician. Hospital organization and management is a science in itself. It is therefore no reflection upon the medical profession to say that the average physician or surgeon is not the most successful hospital administrator.

Hospital administration is a branch of modern medical service in which non-medical men and women of adaptability and with a measure of executive ability and experience are proving a success. In other words, they are "coming to the front"; and more of them are coming every year. More and more a division of work in the hospital is effected whereby the doctor's duties are limited to professional attention to the patient. The financial, commercial, and household problems involved in the organization and operation of the hospital are being taken over by persons who by inclination and training are fitted to perform that important work—persons who, while not indifferent to the professional work of the physician and the physical condition of his patient, will not allow themselves to become so engrossed in that as to neglect the physical condition of the hospital.

To conduct this new department of *THE JOURNAL-LANCET* a layman has been chosen. Matter written or selected for publication in these pages will deal largely with the non-medical problems of the hospital. It will

be our aim to be of assistance especially to the small community hospitals. These are growing in number and importance throughout the Northwest. Their existence is invariably conditioned upon at least a reasonable degree of self-support. Many of the larger hospitals in the cities are similarly situated. Economic questions are, therefore, of paramount importance, and will be given due prominence.

Knowledge of practical value is best obtained by the study of actual cases. We therefore invite readers of this department to submit for discussion—and themselves to discuss—questions of present interest that confront them in the operation of their respective institutions. Even matters that may seem trivial to the questioner can sometimes be profitably discussed. "It is trifles that make perfection, but perfection is no trifle." There is no exact science that can be applied to the solution of hospital problems in the composite; but much experience and some exact knowledge applicable to individual problems have been acquired by intelligent, industrious, and faithful hospital workers who have devoted years to their task. To provide a medium for the exchange of such experience and knowledge is the principal purpose of this department.

We trust that we may receive the co-operation of all who are interested in promoting the welfare of hospitals and of hospital workers throughout the Northwest.

THE NURSING PROBLEM IN THE SMALL HOSPITAL

The following communication, received by the writer some time ago, opens up a question of vital interest to small community hospitals everywhere:

Dear Sir: A— is a town of about 2,500 inhabitants in a good farming community. We have a small hospital of 18 beds, well equipped and maintained. There are five resident physicians who do considerable hospital work. The hospital has been doing business here

for five consecutive years. During the first three years we endeavored to conduct a nurses' training-school. However, we could not get recognition from the Minnesota State Board of Examiners of Nurses for the work done; therefore we decided to drop the training-school arrangement. At present we are employing untrained girls, and by daily practical work they learn to do our nursing. We begin by paying \$10 a month, with a gradual monthly increase of \$2 until \$25 per month is reached. I find that the girls do fairly good nursing, but the quality is not up to the standard it was when we conducted regular class-work and lectures.

Quoting from a communication from the State Board of Examiners of Nurses, you will understand why we are not recognized: "At a recent meeting of the Board, at which the report of the inspection of hospital was discussed, it was decided that the Board cannot recognize the hospital training-school, the clinical facilities being inadequate."

During the year 1917 we had an average attendance of 6.5 patients per day, the greatest number any one day being 15. Our work is quite general, including surgery, medicine, and obstetrics, with a goodly proportion of each. Can you suggest a scheme for us that would bring our nursing up to a higher standard and comply with the requirements of the State Board of Examiners of Nurses? How do other small hospitals manage? The small hospital seems to be a necessity, the same as the country doctor. And in a hospital there must be nurses. Would it be advisable to conduct a training-school of two or three years' training and then give the pupils a diploma from this hospital, they, of course, to understand that they could not become registered nurses, but would be well equipped for community nursing? Then, as we grow into more clinical work, we might be placed in line for recognition later.

The situation in which this hospital finds itself is duplicated in scores of small hospitals throughout Minnesota, North and South Dakota, and Montana. It is the most serious problem with which these hospitals have to contend at the present time. Moreover, there is a serious shortage of nurses in this country. The army, the navy, and the American Red Cross are appealing for more nurses, and the training-schools of the country are responding to the best of their ability. But nurses cannot be taught from books and manikins only.

In Minneapolis and St. Paul the hospitals have generally taken on as many student nurses as they can possibly teach, and more than they can comfortably house with present dormitory facilities. In a majority of Minneapolis hospitals the ratio of pupil nurses to hospital beds is 1 to 2.5, which means an actual ratio of nurses to patients of 1 to 1.75 or 2. It is, therefore, evident that these hospitals cannot further enlarge their schools without lowering the quality of the practical training imparted to the student. Even if it were possible to find instructive employment for more nurses in the wards and rooms of the

hospital, the cost of housing and boarding so many students presents a grave problem with many hospitals. The question might well be raised whether it would not be entirely proper, and a very wise expenditure of public funds, for the Government or the American Red Cross to give financial assistance to the training-schools which are straining their resources to the limit, and in some cases far beyond, in increasing the production of trained nurses for war service.

But that would not help the small country town hospitals. Their problem is not one of overcrowded dormitories, or student nurses blocking the hospital corridors. If a sufficient number of graduate nurses were available for pay, their nursing problem could, in most instances, be readily solved. It would then be merely a matter of charging enough for the service, or by other means insuring sufficient income to pay the wages of the nurses. But at the present time, and for many years to come, the small community hospitals will not be able to secure trained nurses "for love nor money"; they simply are not to be found for such positions. The question is then, shall the community hospital be abandoned?

The country hospital is as necessary to the health and well-being of the community as the country doctor, as our correspondent well states. There should be a hospital bed for every 100 inhabitants in every well-organized community. The hospital should be the center of health activities and health education in the community. It should be a cherished public enterprise—neither a charity nor a personal venture. But it cannot exist without nurses.

It is regrettable that no plan has been worked out whereby the small hospital, situated as the one above described, and as hundreds of others like it, can be of assistance to the Nation in the present crisis in the nursing field. Surely, such a hospital, with a competent registered graduate nurse in charge and a group of capable physicians who are willing to lecture and instruct, should be capable of preparing students for the larger hospital training-schools, where they might be finished as thoroughly trained nurses in one or two years.

Under present conditions, the only way for the hospital situated as the one above described, is to continue to hire the best help available to do the necessary nursing in the most practical manner possible. Young women thus employed will, of course, not remain long enough to become even good practical nurses, and, having no recog-

nition or standing as nurses or nurse helpers in prospect, they will not apply themselves to any earnest study of the theory and principles of their occupation. To inaugurate any kind of course of systematic, theoretical, and practical instruction would be futile, so long as no certificate that would be of any value to the finished student can be given.

The nursing problem of the small hospital is one that demands attention. If our constituted state nursing authorities cannot work out a solution, then it is for the hospital workers who are interested to give earnest thought to the question, discuss it freely from all angles, and thus perhaps eventually work out a plan whereby the small hospital can be given a fuller opportunity to serve our country, both in the training of nurses and in conserving the health resources of the nation.

BOOK NOTICES

THE PRACTICAL MEDICINE SERIES. Comprising Ten Volumes of the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume IX: Skin and Venereal Diseases. Edited by Oliver S. Ormsby, M. D., Professor and Head of the Department of Skin and Venereal Diseases, Rush Medical College, and James Herbert Mitchell, M. D., Hyde Memorial Fund Fellow, and Assistant in Cutaneous Pathology, Rush Medical College. Series 1917. Chicago: The Year Book Publishers, 1917. Pp. 227. Price, \$1.35. Price of the Series of Ten Volumes, \$10.

The Year Book for 1917 on Skin and Venereal Diseases is again edited by Dr. Ormsby, and is as interesting as his former editions. There has been no one great advance in the past year's researches.

Further observations are reported on nitrogen metabolism in "eczema," and Schamberg states that the "eczemas" which have no definite external cause usually show a decided nitrogen retention. A new fungus dermatosis is described by Castellani.

Of local interest is the case of systemic blastomycosis without cutaneous manifestations, reported by Dr. T. A. Peppard, of Minneapolis.

"Perleche," a type of impetigo occurring at the commissural fissures, is brought to the attention of dermatologists. This is a common dermatosis in school children.

The Dermatology of Active Service in the Royal Army Medical Corps is reported by Wettenhall. The pustular and parasitic diseases are the more common. "Eczema" is rare, an observation that has also been made by Dr. John Butler, of Minneapolis, who is in charge of the dermatological work at Camp Lewis, Washington.

Nothing new is added to the treatment of gonorrhea

or syphilis. The various substitutes for German-made salvarsan are mentioned, but no comparative values are given.

The value of the routine and standardized Wassermann test is emphasized.

Calomel ointment has been proven to be just as efficient as mercury ointment in the inunction treatment of lues. This may tend to make popular this valuable method of employing mercury, as the calomel ointment is cleaner than the older "blue" mercurial ointment. At Dr. Sweitzer's Clinic at the University of Minnesota we have used ung. calomel (50 per cent) as a routine with uniformly excellent therapeutic results.

The Year Book is especially valuable to the dermatologist, and can be read with benefit by all interested.

—MICHELSON.

THERAPEUTICS AND PREVENTIVE MEDICINE. Edited by Bernard Fantus, M. S., M. D., Associate Professor of Medicine, Subdepartment of Therapeutics, Rush Medical College, Chicago, Ill. Preventive Medicine, by William A. Evans, M. S., M. D., LL. D., Professor of Preventive Medicine, Northwestern University Medical School. Practical Medicine Series, 1917. Cloth. Price, \$1.50. Pp. 384, with 18 illustrations. Chicago: Year Book Publishers, 1917.

This is a condensed review of the new things in the current literature of the year in these two subjects.

Though the relative space assigned is not necessarily an index of the importance with which these two subjects are regarded, it is noticeable that "Therapeutics" is given twice as much space as "Preventive Medicine." At the present rate of growth of interest in the latter subject, it will not be long before that proportion will be reversed.

Under "Therapeutics," edited by Bernard Fantus, a short section is devoted to the new methods of administration including the sublingual route and administration by means of conjunctival absorption. The latter method is spoken of as possible with certain drugs, but is not advocated by the editor. Other articles are reviewed on the technic of intravenous and intraspinal medication.

Considerable space is given to antiseptics, germicides, protozoacides, etc., some of them new, but most of them old friends in new dresses. A comprehensive review of the literature on vaccines, thermal and phototherapy, hydrotherapeutics, electrotherapeutics, and radium therapy completes this part of the volume.

In the section on "Preventive Medicine," edited by Dr. W. A. Evans, comment is made, in connection with a discussion of public health, on the growth of health insurance, which is not preventive medicine at all.

There is much interesting comment on the effect of the war on public health and vital statistics, and it is noted that outside of the zone of fighting, while the birth-rate is lowered in the belligerent countries, the general health of infants is as good as, or even better than, usual, since a larger proportion of mothers nurse their babies by virtue of necessity; and in those regions where the population is on rations, the portion for the nursing baby is added to the mother's allowance.

Occupational hygiene and military hygiene, of course, hold an important place and many articles of vital interest are reviewed in this section.

—GEORGE.

THE
JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
 H. J. ROWE, M. D. - - - Casselton, N. D.
 H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

APRIL 1, 1918

THE MILITARY STATUS OF THE MEDICAL MAN

During the Spanish-American war when camps were established there was comparatively little respect paid to the sanitarians, sanitary engineers, or medical men, who should have had a louder voice in the location of camps and the management of camp-life. The result was, as we all remember, a very great increase in communicable diseases, such as typhoid, particularly; and we know, as a result, more men died in camps than were killed in battle.

The present-war standing of the medical man is a little different because the military department saw that something had gone amiss, and during this war they are quite willing to do everything possible to keep their cantonments in good order. And yet there remains something more to be done in this direction. The average military man has but little confidence or respect even for the medical department, particularly if it is presided over by young officers of low or moderate rank; but recently an effort has been made by Drs. W. J. Mayo and C. H. Mayo to stand behind Surgeon-General Gorgas in his endeavor to put the medical man on a better and a higher basis. The effort, then, is to elevate the rank of surgeons and physicians, as well as of sanitarians, to such a point that they may have influence and that their influence may be felt.

Senator R. L. Owens has always been favor-

ably inclined toward the medical profession, and is advocating a bill which will produce the result that the heads of medical departments of the army and the medical profession throughout the country hope for. This bill provides for approximately seventy new general officers, thirty-five of whom are to be major generals, thirty-five brigadier generals, and about five hundred and sixty are to have the rank of colonel. Unless this can be accomplished it is clearly foreseen there will be a repetition of the difficulties which were so conspicuous in the Spanish-American war. For instance, it is said that in Norfolk, Va., where they were building an embarkation camp the buildings were not ready in time for the soldiers. The medical officer tried to impress upon the commanding officer the necessity of completing a hospital first in order that the inevitably sick soldier would be promptly and scientifically looked after. This recommendation was disregarded, and the very calamity which the medical man predicted came to pass. The place was filled with sick soldiers, but no hospital was ready for them.

Dr. W. J. Mayo says that scandals in army sanitation will occur unless the medical corps is given more prestige, in order to enforce its recommendations; and he is rather surprised that the medical corps has no representation in the War College. He thinks this would be a very necessary aid, and would reduce the death-rate in the army tremendously. The same would apply to the navy, as well as to the army, if medical men were put on a higher plane, equal, say, to the positions given them in the French and British armies. It is understood that the Secretary of War and the President are not in favor of the bill, and yet it is acknowledged by everyone in Washington that some of the best medical men in the United States are giving their services at home and abroad, while few of them have a rank above major. Unless the rank is elevated the men who are abroad or are to go abroad will not command the respect that they should; and yet the uniform may cover a man of world-wide experience, but, because he is not entitled to a higher position in the medical department, his recommendations are commonly disregarded.

The Minnesota State Medical Association and the Hennepin County Medical Society have both passed upon this question, and have urged by resolutions the passage of the Owen bill, which has been fathered so carefully by Surgeon-General Gorgas and Major Franklin H. Martin.

WAR AGAINST TUBERCULOSIS

The Anti-Tuberculosis Committee of the Associated Charities, of Minneapolis, which is a group of public-spirited men and women working with members of this civic board, has planned a three-year campaign in its battle against this terrible scourge. The plan was outlined before the Committee and a group of invited guests at a luncheon some days ago, a representative of *THE JOURNAL-LANCET* being present. Some features of the plan and the work are especially interesting and instructive, but our present comments on them are not to be taken as at all comprehensive, for we shall reserve for another occasion a complete presentation of the work and the publication of the full program.

The three-year program has been arranged after a careful study of the work done or undertaken by like organizations in all parts of the country, if not abroad, modified by the Committee's experience in this field.

The time-limit of the campaign does not imply the hope to solve the problem in *three* years, nor a purpose to stop the work at the end of such period. It simply means three years of well-directed effort with progressive steps toward a definite goal. The divisions of the work, as outlined in each of three years, are so co-ordinated that definite results will be accomplished, and the work as a whole will show definite and practical results.

The practical work, which is both curative and preventive, and is to be done on a large scale, with expert paid help, is an integral part of the educational work, thus rendering the latter more effective. As the problem is largely a social one, the Committee has acted wisely in providing for competent social workers and, especially, in inviting the co-operation of organized labor. This fact was somewhat dramatically illustrated at the meeting. After some reports had been made, which showed the character, the magnitude, and the need of the work, Dr. James E. Freeman, Rector of St. Mark's Episcopal Church, made a brief address in which, basing his conclusions upon public indifference to the loss of human life from wholly preventable diseases, he characterized our civilization as the civilization of the cave-dwellers. Following Dr. Freeman's remarks, the Chairman invited a guest of the evening, an ex-waiter and ex-cook, to speak. The gentleman had none of the graces of public speaking, such as adorn in profusion all that Dr. Freeman says, but he had had an experience

which robbed Dr. Freeman's characterization of our civilization of any, even the least, exaggeration. He said he had worked as a cook or a waiter in the best clubs, hotels, and restaurants in all parts of the country and had found the same conditions east, west, north, and south. The kitchen, as a rule, is in the basement or sub-basement, with little or no ventilation and a temperature of 110 to 120 degrees. At the end of each shift of three or four hours—the limit of human endurance—the cook goes to a vermin-infected locker at a temperature perhaps of 40 or 50 degrees to change his uniform for his street clothes. Such working conditions account for the fact that tuberculosis among cooks is more prevalent than in any other class, with possibly one or two exceptions.

But the above facts do not tell the whole story of the kitchen of the restaurant, the hotel, and the club. The uniform discarded in the kitchen locker by a cook or a waiter, with wholly inadequate or no washing, may soon appear upon another waiter, for individually owned uniforms are almost unknown in these places. The distance between the consumption-breeding kitchen and the dining-room is not so great that even a feeble tubercle bacillus may not cover it with the aid of a waiter and his tray of food, the latter being the ideal home for the unseen foe. We are, indeed, in the cave-dwelling age, or worse, if the correct measure of civilization is regard for human life.

This simple incident may serve to illustrate the need of work, and indeed hard work, along educational, social, preventive, and curative lines. The work of this organization is so planned, and with a liberal supply of funds, and the co-operation of practical high-minded men and women, that results will be obtained.

 THE COMMUNITY HOSPITAL—ITS
NEEDS AND THE NEED OF IT

We announced in a recent issue our intention soon to add a *Hospital Department* to the other departments of *THE JOURNAL-LANCET*; and in doing so we were not unaware of the difficulty of maintaining such a department along the lines laid down in our announcement, for the work of editing a hospital department must necessarily be done by a practical man, whose very fitness for it means that he is a busy man, with limited time for a work of love outside of and in addition to his daily task of hospital management. Of course, we had found the man to conduct the de-

partment before we announced the undertaking, and we hardly need say how reluctant he was to assume the burden in addition to his arduous work involved in the superintendency of a large hospital, whose working hours are limited only by the laws of necessity, and not by the laws of trade-unionism.

We are glad to be able to announce that Mr. G. W. Olson, superintendent of the Swedish Hospital of Minneapolis, will have charge of this department. Mr. Olson brings to the work a long and successful experience as a hospital superintendent, an enthusiastic belief in the need for community hospitals, and a sincere desire to promote their establishment and proper conduct.

He believes that community hospitals properly organized and properly conducted will help to solve many of the problems that confront the medical profession and the public in both curative and preventive medicine.

The community hospital is not a hospital that is made a cloak for bad surgery done by incompetent men, although such hospitals, large and small, exist. The community hospital can be made so valuable in the conservation of health and life that no community can afford to be without one; and the community should bear a large share of the burden of its establishment, and should have so large a share in its management that no physician or group of physicians can destroy its usefulness by abuse of its privileges.

The purely private hospital can sometimes do the work of a community hospital, but the purely private hospital can be made to pay in so few small, or even large, communities, that the semi-public hospital must be depended upon to meet the general needs. In such a hospital the public must contribute freely, not only towards the cost of the building and its equipment, but toward its endowment or the annual cost of its maintenance.

Of course, every hospital must be under the supervision of medical men in the treatment of its patients, but in other respects a capable business man or woman, or a board composed of such persons, is indispensable; and the community hospital that is to meet the needs of all classes of people, must be, in a large measure, a semi-public affair, although some medical men are capable of conducting a semi-public hospital without any outside assistance other than financial aid in the form of a building and equipment fund that pays little or no interest.

To relieve Mr. Olson of the too-great burden of supplying material for such a department

twice a month, we shall publish it only *once* a month, or even omit it occasionally from two consecutive issues. If, on the other hand, our readers, by their contributions, demand its appearance twice a month, it may so appear.

The value of the department would be greatly enhanced if it could be devoted entirely to the discussion and answering of practical questions propounded by our readers. It cannot be so devoted unless our readers ask questions and take part in their discussion. If any question asked does not seem to the editor of sufficient importance to be answered through the department, he will answer it by letter.

SUBSTITUTE FOR SALVARSAN

Dr. Flexner of the Rockefeller Institute has evidently been at work upon a substitute for the arsenical preparations known as *salvarsan* and *neosalvarsan* and by various other names, and he hopes, and has promised, to produce a product the cost of which will be within the reach of everyone. This information so far has come largely through the daily press, and consequently no mention has been made as to whether the new product is in the market or not, nor has it been said that the Government will control the entire output, which is very likely to be the case. At all events, an enormous amount of the antispecifics have been commandeered by the Government, and it will be exceedingly difficult for some time to acquire reliable substitutes. But the time is coming when this problem will be solved completely, and to the satisfaction of every practitioner or syphilographer. With a substitute that will retail for twenty-five or fifty cents a tube there would be a very great difference in the treatment of syphilis, old and new; and if this time comes there seems to be a reasonable hope that syphilis may be more promptly stamped out than tuberculosis.

The various preparations which have been employed while it has been difficult to get the original salvarsan, have given satisfaction in some instances, and no satisfaction at all in others. In fact some of them have been found to be unreliable, and even poisonous; consequently it is better, if the amount of salvarsan is still limited and none of the old product can be obtained, to go back to the use of mercury. There are comparatively few cases which are not benefited in some degree, and perhaps tided over, by intensive mercurial treatment, such as a salicylate in oily form. A good many of the older men still

adhere to the old preparations, such as protiodide, calomel, and bichloride of mercury. A great many practitioners still adhere to iodide of soda or iodide of potash, and give it in moderate doses, claiming good results, particularly in old cases where iodide evidently does something toward increasing the secretions and thereby eliminating fluids from the body.

As soon as Dr. Flexner's laboratories are in full working order and his product has been tried out thoroughly, it will be published to the medical world. All of us are looking forward to this time, and we hope it may not be far distant, but during the period of war and during the need of so much salvarsan or the new products, the Government will probably deny us its use except where it is absolutely necessary.

MINNEAPOLIS CLINIC WEEK

The detail program for the Minneapolis Clinic Week is being rapidly worked out and will be ready before the days set for the clinic, April 8th to 12th, inclusive. The work of getting up a program on such an extensive scale and covering a large number of hospitals is not an easy matter, but the Program Committee has been working night and day to co-ordinate all the clinics. As far as possible, the clinics will be arranged so as not to conflict too much, but it would be almost a miracle if there were not two clinics of the same kind at one or more hospitals, yet the general plan which the executive committee has adopted is to give each man an opportunity to attend the clinic or see the work of the clinician in which or in whom he is specially interested.

The City Hospitals, the University Hospitals and the other listed hospitals in Minneapolis, comprising 2,300 beds, will offer a vast amount of clinical material. The smaller hospitals where but two or three visitors can be accommodated will do the same class of work, though appealing perhaps to only a small number, while the larger clinics and the larger amphitheatres will accommodate from ten to seventy-five visitors.

The complete program, visitors will see either before they arrive in Minneapolis or upon their arrival.

It is urged upon all who expect to visit the clinics to go at once upon their arrival to the Radisson Hotel, the headquarters of the whole Clinic, for folders and cards, which will be issued at the Bureau of Information in the lobby. At that time the various exhibitors will have their

announcements ready, so that one may see, if he chooses, the latest instruments or other equipment necessary in the practice of modern medicine and surgery.

Those who have looked over the tentative program will note some suggestions as to the character of the clinics. Most of the men have already determined upon what they will exhibit, and the final program will give all the details.

The annual meeting of the Hennepin County Medical Society will take place Monday night, April 8, and will take the form of a banquet at which good speakers will be present. It will really be an opportunity for social intercourse, as well as for some scientific work.

We regret to announce that the Clinic has been disappointed in the promise of seeing and hearing Major Seelig. He is unable to be present on account of a death in his family, which necessitates his remaining in St. Louis.

The Program Committee has arranged the following programs for the afternoon sessions at headquarters, Radisson Hotel, and for motion pictures:

PROGRAM OF THE AFTERNOON SESSIONS AT RADISSON HOTEL

Daily, two motion-picture demonstrations of various surgical operations, several of which will illustrate military surgery.

Radium in Dermatology: Demonstrations of Application and Report of Cases.....Dr. S. E. Sweitzer
Bone-Sarcoma.....Dr. E. T. Bell
Water-color Illustrations of Some Commoner Diseases of the Pharynx.....Dr. J. D. Lewis
Lantern-slide Demonstrations of Gastro-intestinal Lesions.....Dr. F. S. Bissell
Lantern-slide Demonstrations of Brain Tumor.....Dr. A. S. Hamilton

A New Method of Preparing Vaccines.....Dr. W. P. Larson

Bone-Surgery: Demonstrations of Apparatus Employed in the Management of Traumatic Cases.....Dr. A. E. Wilcox

Motion-picture and Lantern-slide Demonstration of the Technic of Local Anesthesia.....Dr. R. E. Farr

MOTION-PICTURE FILMS

Plastic Surgery, Face and Jaw, at Lyon, France.....Dr. Pont
Cholecystectomy for Cholecystitis. Appendectomy. Gastro-enterostomy.....John F. Erdmann, M. D.
Splenectomy for Banti's Disease.....

.....Howard Lilienthal, M. D.
Operation for Pruritis Ani; Ligature Hemorrhoidectomy and Rectal Instrumentation.....

.....Samuel G. Gant, M. D.
Functional Conditions Contracted from Life in the Trenches.....Dr. Sollier
Hysterectomy for Pyosalpinx.....Howard A. Kelly, M. D.

Ferguson-Andrew's Operation for Radical Cure of Inguinal Hernia.....Albert J. Ochsner, M. D.
 Reconstruction of Pyloric and Duodenal Regions of the Stomach by Facial Transplants, after Resection of Ulcer without Gastro-enterostomy.....
Alfred A. Strauss, M. D.
 War Neuroses—Result of Shell Shock, Taken in the British War Hospitals. Blood-Transfusion (citrate method).....Richard Lewisohn, M. D.
 Technic of Obstetrics, Normal and Abnormal.....
J. W. Harkoe, M. D., New York
 Primary Major Thoracotomy and Lung Mobilization for Acute Left Post-Pneumonic Empyema of the Thorax.....Howard Lilienthal, M. D.
 Re-education Center, at Vizille, France. Smith Intracapsular Cataract Operation.....
A. S. Green, M. D., and L. D. Green, M. D.
 Prostatectomy, Suprapubic.....J. Bentley Squier, M. D.
 New Fracture Frame, Especially Useful in Military Surgery.....George W. Hawley, M. D.

NEWS ITEMS

Dr. Theo. Holtman has moved from Wheaton to Kilkenny.

Dr. Randall Thompson, of Killdeer, N. D., died last month at the age of 45.

Smallpox and measles are unusually prevalent, each in mild form, in the Northwest.

The new Sanford Hospital at Farmington was opened last month with seven patients.

Dr. H. Williams Smith, of Crookston, died last month in Los Angeles at the age of 55.

Drs. O. Th. Sherping and C. O. Estrem, of Fergus Falls, have formed a partnership.

Dr. L. W. Hill, of Watertown, S. D., is doing post work in his specialty in San Francisco.

Dr. C. M. Hollister, who formerly practiced at Pierre, S. D., has located in Yankton, S. D.

Dr. G. W. Moore, of Hopkins, was elected mayor of that city last week on the "wet" ticket.

The Sprague Hospital of Huron, S. D., graduated three nurses from its training-school last month.

Lieut. A. Peake, M. O. R. C., of Grand Forks, N. D., has been ordered into active service recently.

The nurses' training-school of Eitel Hospital of Minneapolis graduated a class of ten nurses last week.

The amount of money obtained from the sale of Red Cross seals in Minnesota is officially stated as \$83,000.

Dr. Clara McManus has moved from Centerville, S. D., to Gannvalley, S. D., where she formerly practiced.

Dr. C. L. Brimi, of Cooperstown, N. D., has been honorably discharged from the R. M. C. for physical disability.

Lieut. W. L. Cowper, of Michigan, N. D., has been honorably discharged from the R. M. C. for physical disabilities.

Lieut. H. E. Binet, of Coleraine, has been honorably discharged from the R. M. C. on account of physical disability.

Architect A. F. Gaugher, of St. Paul, has completed plans for the addition to be made to St. John's Hospital of that city.

Three recent graduates of the nurses' training-school of St. Luke's Hospital of Fargo, N. D., have gone to Camp Dodge, Iowa.

Dr. R. M. Pederson, of Minneapolis, has been made lieutenant-colonel of the 109th sanitary train at Camp Cody, New Mexico.

Dr. G. H. Luedtke, of Fairmont, who is at the base hospital at Fort Riley, has been given charge of 40 beds in the general medical section.

Lieut. James C. Walton, of Isabel, has been honorably discharged from the R. M. C. for physical disabilities incurred in the service.

Dr. J. W. Cox, Director of the North Dakota Public Health Laboratories, visited Chicago and Detroit recently in the interests of the Laboratories.

Dr. G. M. Williamson, President of the North Dakota State Medical Association, addressed the Northwestern District Medical Society at Minot on March 20.

Dr. A. C. Newman, of Fargo, N. D., died last month at the age of 55. Dr. Newman retired from active practice several years ago on account of poor health.

Dr. J. A. Freeborn, of Fergus Falls, who was honorably discharged from the R. M. C. on account of physical disability, has resumed practice in Fergus Falls.

Dr. A. L. Kuske, of Hutchinson, who has been taking a year's course of special work in eye, ear, nose, and throat work in Chicago, has resumed practice at that place.

It is proposed in North Dakota to organize the presidents and secretaries of the county and district medical societies into a group or section of the State Association.

Dr. John Lyng, who formerly practiced in Fergus Falls, after three months of clinical work in the East, has located in Minneapolis, with offices in the Masonic Temple.

Mr. B. C. Ford has been compelled by the operation of the draft law to discontinue his work in the Minot Branch of the North Dakota Public Health Laboratories.

Dr. L. G. Rowntree, chief of the Department of Medicine of the University of Minnesota, is making rapid progress toward recovery after an operation at the Mayo Clinic.

A visiting nurse's survey of the schools of Northfield showed that from 50 to 75 per cent of the 400 children in the ward schools had some physical defects needing attention.

Many of the county and district medical societies of North Dakota are carrying the memberships without dues of members who have enlisted in any form of army service.

Dr. J. D. Windell, of Spokane, Wash., who was a pioneer physician at Minot, N. D., has been visiting in the latter city while on his way to Johns Hopkins for postgraduate work.

Dr. R. A. Schnacke, St. Paul's police surgeon, has resigned after six years' service in that position, and is credited with having been one of the most efficient police surgeons the city ever had.

Apprehension as to the safety of Dr. W. J. Kucera, of New Prague, is felt by his friends. He is on the Red Cross mission to Roumania, and was probably at Odessa when that city was captured by the Germans.

Mr. Harry T. Kennedy, a senior medical student in the University of Minnesota and a resident of Minneapolis, died last month of spinal meningitis. When taken sick he was an interne in the St. Paul City Hospital.

The Press of the Minnesota cities and villages where Dr. Mabel Ulrich has spoken as supervisor of social hygiene for the State Board of Health, give her unstinted praise for both what she says and her manner of saying it.

Miss Mabel Fodness, formerly school nurse for Grand Fords county, N. D., and recently employed by the North Dakota Public Health Service, has been ordered into active service and to report temporarily at Camp Fremont.

The public-health nurses in the Northwest who are doing short-term work in villages which subscribed liberally for Red Cross stamps are making splendid reputations, and are creating a demand for permanent nurses. Their educational work is of incalculable value.

At the regular monthly meeting of the Grand Forks District Medical Society last week, Dr. J. D. Taylor read a paper on "The History of the Carrel-Dakin Solution," speaking particularly of the work of the late Dr. Ruger, of the United States Army. Dr. H. W. F. Lane reported several clinical cases.

Capt. T. D. Smith, of the Harvard Base Hospital, who was formerly a member of Dr. Granger's staff at Rochester, and who was the first American officer wounded in France, was given a luncheon by the Rochester Commercial Club last month, when he delivered an address to that body on war conditions.

Big Horn County, Montana, is doing unusually effective educational work in sanitary matters. The health board of the county has purchased for Dr. W. A. Russell, of Hardin, the health officer, a laboratory equipment and a stereopticon; and Dr. Hardin has been giving a series of instructive health talks, assisted by the chairman of the Child's Welfare Department of the State Board of Health.

The annual meeting of the Rice County Medical Society was held at Faribault last month, when the following officers were elected for the current year: President, Dr. W. H. Hunt, Northfield; first vice-president, Dr. W. H. Robilliard, Faribault; second vice-president, Dr. W. H. Theissen, Faribault; secretary-treasurer, Dr. F. U. Davis, Faribault; delegate, Dr. W. L. Mayland.

In the program of the Minneapolis Clinic Week published in our last issue, the name of Dr. C. D. Whipple appeared as one who would give surgical clinics at the Norwegian Deaconess Hospital. This should have been Dr. A. G. Wethall, a member of the staff. Dr. Whipple was never connected with this hospital. The mistake occurred in telephoning the list of names to the Chairman of the Program Committee. Dr. E. L. Pausel was recently elected chief of staff at this hospital to succeed Dr. J. F. Plane, who went to North Dakota.

Lieut. John P. Rosenwald, of Minneapolis, is one of five Minnesota soldiers, and the only physician, recommended for the United States distinguished service cross for valor in action in the Luneville sector of the great battle now in progress in Europe. This pleasant information, received by telegraph, was preceded by a few days by a letter received in THE JOURNAL-LANCET office from Lieut. Richard Craumer, from somewhere in France, which says, "Dear Editor,—Though the days here in France are very full for me I still have time 'to miss' the LANCET, so kindly send it to me at the address below. Drs. Rosenwald and Soper are stationed here with the 151st Field Artillery, which is the old 1st Minnesota. There is nothing but good to report of the Minnesota boys."

Dr. E. D. Peek, the health officer of Thompson Falls, Mont., where the prevalence of scarlet fever, smallpox, and measles threatens an epidemic, has notified the public that the health laws will be enforced to the limit if need be. With a quarantine of 28 days for scarlet fever, 21 days for smallpox, and 14 days for measles, a quarantine enforced by the sheriff, carelessness in such matters will not pay. Why must such health officers be almost unknown in small places?

The staff together with most of the visiting doctors of the Deaconess Hospital of Minneapolis have declared over their signatures that they are unqualifiedly opposed to fee-splitting, and have petitioned the management of the hospital to exclude any doctor from practicing in the hospital who violates either the spirit or the letter of the law on our statute books known as Chapter 365, S. F. No. 495. The management of the hospital considered the matter and willingly agreed to take care of their end of the question.

Dr. C. E. Henry, of Minneapolis, has organized the first naval station hospital unit sent from the Northwest. The unit consists of five doctors, ten nurses, and 55 non-medical men as assistants. The members of the medical staff are as follows: Dr. C. E. Henry, lieutenant-commander, with grade of surgeon director; Dr. C. C. Tyrell, lieutenant commander, with grade of surgeon; Dr. J. T. Litchfield, lieutenant, with grade of past-assistant surgeon; Dr. J. A. Reigal, lieutenant, with grade of assistant surgeon; and Dr. W. P. Robertson, junior lieutenant, with grade of assistant surgeon. The members of the staff, except Dr. Robertson, who is a resident of Litchfield, are Minneapolis physicians.

RECENT NEW ASSIGNMENTS OF NORTH-WESTERN MEDICAL OFFICERS

Minnesota—

To Fort Riley, Kas.: Capt. H. H. Sellers, Minneapolis; Lt. L. L. Keene, Alexandria; Lt. B. Odegnard, Emmons; Lt. J. G. Goggin, Stewartville; Major E. A. Meyerding, St. Paul; Lt. H. H. Slocumb, Belgrade; Lt. O. J. Seiffert, New Ulm; Lt. C. A. Rathbun, Rice.

To Camp Dodge, Iowa: Major F. E. Burch, St. Paul.
To Ann Arbor, Mich.: Lt. F. W. Whittemore, St. Paul.

To Camp Custer, Mich.: Lt. R. I. Barickman, Lewisville.

To Camp McClellan, Ala.: Lt. C. H. Ghent, St. Paul.
To Fort Leavenworth, Kas.: Capt. W. S. Nickerson, Long Lake.

To Rockefeller Institute, N. Y.: Lt. H. W. Hundling, Rochester; Lt. R. R. Simmons, Rochester.

To St. Paul: Lt. F. A. Grawn, Duluth; Lt. P. A. Ashley, Minneapolis; Lt. F. L. Powers, Pipestone.

To Pittsburgh, Pa.: Lt. F. E. Ellison, Monticello.

North Dakota—

To Fort Leavenworth, Kas.: Lt. B. D. Verret, Rolla.

To Fort Riley, Kas.: Lt. P. H. Rowe, Casselton.

South Dakota—

To Fort Leavenworth, Kas.: Lt. G. A. Stevens, Sioux Falls.

To Fort Riley, Kas.: Lt. W. J. Ferguson, Millbank.

OFFICE FOR RENT IN MINNEAPOLIS

Three hundred and sixty square feet of floor space in one of the best down-town office buildings, suitable for physician or dentist. Remarkably low rent. Address 118, care of this office.

A SPLENDID OPENING

There is an excellent opening in a fine village near the Twin Cities for a high-grade physician who can do some surgical work. A man under forty is preferred. A splendidly equipped office is ready for him. There is nothing to sell; simply the right man is wanted. Address 107, care of this office.

POSITION WANTED

I desire a location as assistant or as associate to a physician in a town of 5,000 or over in the Northwest. I am married and have two children, and am a graduate of the N. Y. U. Medical College, '10. Have had two years' internship, 3 years private practice and 3 assistantship. Address 117, care of this office.

POSITION AS OFFICE ASSISTANT WANTED

By a young woman who has been assistant for over five years to a surgeon now called to army service. She can do all the work required of an assistant in minor operations, keep books, do correspondence, operate an x-ray machine and develop plates, etc. Address 115, care of this office.

PARTNERSHIP WANTED

Physician of ten years' successful practice desires association with physician or surgeon in city of 4,000 or more where there is opportunity for permanent practice; American, Protestant, aged 36; Minnesota license; reciprocity; just completing twelve-month postgraduate course surgery and urology; proposition must be strictly ethical and bear investigation; references exchanged. Address 116, care of this office.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-first annual session, opened Sept. 24, 1917, and closes June 8, 1918. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters this session. For further information address Charles Chassignac, M. D., Dean, New Orleans Polyclinic, post office drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

In the Treatment of

RHEUMATIC and NEURALGIC ILLS

you will obtain substantial aid from the thorough use of

K-Y ANALGESIC

This non-greasy, water-soluble local anodyne will enable you to ease your patient's pain and discomfort, while your internal or systemic medication is combating the cause of his condition.

The advantages, moreover, of relieving the pain of a facial neuralgia, an inflamed joint, or aching lumbar muscles without recourse to coal tar derivatives cannot fail to appeal to medical men.

K-Y ANALGESIC is a safe and effective adjunct that will daily grow more useful to the practitioner as the many opportunities for its effective use are realized.

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT

15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Hands that are Rough, Cracked and Sore are restored to their natural softness and comfort by **K-Y Lubricating Jelly**, well rubbed in.



It "works in" quickly, and doesn't soil the linen. You know it as a surgical lubricant; it's "just as good" an emollient.

Collapsible tubes, druggists, 25c.

Samples and literature on request.

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT

15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Paraffin Treatment of Burns

is successfully applied by the use of

REDINTOL

Made from carefully selected ingredients of the highest quality, and combined in proportions to insure the most satisfactory results, Redintol makes possible the ready application of the newest and most effective method of treating burns, even of the most severe degree.

Redintol is a plastic and elastic dressing which forms an occlusive, non-adhering covering to the injured area. It can be applied with practically no pain and affords immediate relief from burning and smarting.

Redintol promotes rapid healing, with minimum scarring and lessened contractions of the skin or tendons.

Redintol is supplied in individual packets, ready for immediate application.

Sample and Full Directions on Request.

Johnson & Johnson

New Brunswick, N. J.

U. S. A.

HEPCO FLOUR

For Diabetics

A palatable, nutritious flour that corrects diabetical ailments. Starchy Indigestion, and other troubles requiring a starch restricted diet. Less than one per cent starch. Rich in Protein and Fat. Strengthening, appetizing, immediately beneficial.

Approval by the American Medical Association, and prescribed by leading physicians.

Try Hepco Dodgers and Grits. Ready to use.

Write for free booklet containing valuable information for diabetics.

Waukesha Health Products Company
131 Grand Avenue, WAUKESHA, WIS.



STRUCK & CO.

112 SOUTH 5TH ST. MINNEAPOLIS, MINN.


Use Vaccines

in Acute Infections

The early administration of Sherman's Bacterial Vaccines will reduce the average course of acute infections like Pneumonia, Broncho-pneumonia, Sepsis, Erysipelas, Mastoiditis, Rheumatic Fever, Colds, Bronchitis, etc., to less than one-third the usual course of such infectious diseases, with a proportionate reduction of the mortality rate.

Sherman's Bacterial Vaccines are prepared in our specially constructed Laboratories, devoted exclusively to the manufacture of these preparations and are marketed in standardized suspensions.

Write for Literature.



As an aid in Diagnosis

use a Laboratory whose personnel and equipment are beyond question

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aenaerobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

Sterile containers, with needle, gratis upon request

National Pathological Laboratories (Incorporated)

CHICAGO, ILL. ST. LOUIS, MO.
5 S. Wabash Ave. 4485 Olive St.—Corner Taylor
NEW YORK, N. Y.
18 E. 41st St.

PUBLISHER'S DEPARTMENT

LANDSCAPE DESIGNING

We know of no greater source of annoyance, in the ordinary affairs of life, than to have one's grounds poorly designed or planted and thus made an eyesore for many years. For instance, we know a man in Minneapolis who employed a high-priced landscape architect to lay out and plant a section of his grounds. It was artistically planned, but after the second or third year he discovered that all his flowers bloomed in the early spring, hardly one blooming in the summer and fall. And some of the shrubbery in the foreground was so high that it had to be transplanted.

The old-established Jewell Nursery, of Lake City, Minn., will never make such a foolish and inexcusable blunder, for it employs artists who know better, and its enormous stock of shrubbery of every character is at hand to warn the artist against a mixture of inharmonious colors or of incongruous sizes.

The reputation of the Jewell Nursery has been made by many years of fair dealing and artistic work; and no one need hesitate to place any kind or size of order for things in their line. A knowledge of this fact is a comfort to the busy man or to the particular man who wants to be surrounded in his home by things of beauty.

THE STANDARD MEDICAL SUPPLY CO. OF MINNEAPOLIS

It is a common "trick of the trade" to offer low prices on certain staples, and then make extravagant profits on other products; on the other hand, a dealer or a manufacturer may be unable to show that he sells only on fair margins unless he quotes prices on things whose quality and value are known to customers. Reputable firms follow the latter course. For instance, the Standard Medical Supply Co. quote on another page their prices on certain standard articles. They endeavor to maintain equally fair prices on all things sold by them, whether of their own manufacture or of others.

This company also guarantees to satisfy its customers in every deal made, and to satisfy such customers in both the price and the quality of every article sold. They likewise guarantee promptness of shipment—absolute promptness in all orders for things to be used at once.

The company's facilities are constantly increasing, and their stock is large and complete.

A GREAT SAVINGS BANK

The Farmers & Mechanics Savings Bank of Minneapolis, with assets of \$23,000,000, is an institution of which every thoughtful resident of Minneapolis is proud because it is an institution of the people; and every child and every man who has, or who wants to form, the habit of saving, and is not near some other great savings bank, whether in the city or in the country, should get acquainted with this bank.

The Farmers & Mechanics Savings Bank takes infinite pains to encourage such people in habits of thrift and saving (these habits go together), and it so con-

ducts its banking business that a word of criticism is never heard, and a fear of its present or future instability is unknown. This is the kind of bank that women, and children,—and doctors ought to know.

THE TAX ON OLEOMARGARINE

When oleomargarine was put upon the market, forty-odd years ago, it encountered two justifiable prejudices because it was often fraudulently sold or substituted for butter; and it was composed of unrefined fats, such as lard and cotton-seed oil. Today its fats are, in the main, the refined oils of cotton-seed (quite generally used as a substitute for, and fraudulently sold as, olive oil), peanuts, cocoanuts, soy beans, and corn.

Because of these prejudices, the selfish interests of dairymen are able to maintain a tax of ten cents a pound on colored (to imitate butter) oleomargarine, while the tax on the uncolored (white) product is only one-quarter of a cent. The white butter of winter may be colored, and fraudulently sold as natural-yellow butter without tax or other hindrance; and a capsule of coloring matter may be furnished with the white oleomargarine, with instructions for its use, without increasing the low tax on the oleomargarine.

As the fats of milk seem to carry a trifle more of a growth-promoting product, it may be well to hold on to milk for young children; but science fails to show a particle of difference between the dietary values for adults of the fats of milk and those of oleomargarine.

Even rich and well-to-do people, including so-called butter-cranks, now use oleomargarine for both cooking and table use; and they do so in order to avoid waste and as a protest against the graft of the dairymen obtained through legislation.

WRIGHT'S GUIDE TO THE ORGANIC DRUGS OF THE U. S. P.

The third edition of Wright's Guide to the Organic Drugs of the U. S. P. is just off the press and ready for distribution. This convenient reference book, now in its seventieth thousand, contains brief mention of the more important facts concerning the origin, properties, and uses of official organic drugs, as well as those of the third revision of the National Formulary.

Other information of useful character contained in its 220 pages, printed on thin paper, refer to plant families, botanical and therapeutical terms, index of plant names, poisons and antidotes, Centigrade and Fahrenheit thermometer-scale comparisons, phrases and abbreviations in prescription writing, Latin genitive case endings, symbols and signs used in prescription writing, metric system of weights and measures, and table of equivalents.

This handy compendium is bound in leather and fits nicely in the vest-pocket. It is one of those convenient references that becomes indispensable to both students of medicine and physicians in practice after its usefulness is demonstrated. Wright's Guide is published by Eli Lilly & Company and will be sent postpaid to our readers on request accompanied by twenty-five cents in stamps or coin addressed to Eli Lilly & Company, Dept. F., Indianapolis, Indiana. This nominal cost, we are assured, barely covers the cost of printing, binding and postage.

THE EFFECTIVE TREATMENT OF BURNS

The conspicuous results obtained with the paraffin treatment in France have created a demand for a dependable preparation in this country. Accordingly Redintol has been prepared and placed at the service of American physicians.

Applied according to directions Redintol promptly relieves burning and smarting. Healing proceeds rapidly with the great advantage that scarring and contractions are reduced to a minimum. Redintol, therefore, opens up new and far-reaching possibilities in the treatment of burns, and enables the practitioner to accomplish results that he has rarely, if ever, been able to obtain with the other measures at his command.

Samples and full directions to physicians on request to Johnson & Johnson, New Brunswick, N. J.

MODEL SNOOK X-RAY MACHINE

The Victor Electric Corporation, of Chicago, has opened show-rooms in the new LaSalle Building in Minneapolis for the benefit of their northwestern customers, and their full line of apparatus may be seen there by physicians visiting the city.

They now offer the profession their new "Model Snook" Röntgen apparatus, which Mr. Snook regards a decided improvement over his original model, which has impressed the profession so favorably. A new descriptive bulletin of this apparatus is now ready for distribution, and may be had upon application.

THE WAR-TIME FLOWER GARDEN

The Heatherhome Seed & Nursery Company of New York City offers the public the choicest flower seeds, plants, and bulbs obtainable in this country; and hitherto they have issued the most elaborate catalogue put out by any house. Of course they have charged higher

prices for their choice products than could be obtained for the common varieties.

They have adopted a new and highly praiseworthy plan this year, and have issued a small catalogue, entitled, "The War-Time Flower Garden." This very large saving in cost of catalogues and in the discarding of all but the choicest varieties of seeds, plants, and bulbs, has enabled them materially to reduce the prices of many very choice things, and thus to make new friends among the lovers of the most beautiful flowers obtainable.

Their sweet peas, for instance, are said to be a revelation to all who have never before seen them; and the directions for planting which accompany all seeds sent out are entirely new, being a radical departure from old methods. They frankly tell their customers that one-fourth as many seeds as people generally plant will produce better results, in quantity and quality, than can be obtained from the old way of planting, though this way still be recommended in nearly all catalogues.

Our readers should know this house. Ask them for a catalogue. The Heatherhome Seed & Nursery Co., 258 Fifth Ave., New York.

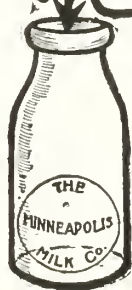
THE MUDLAVA TREATMENT

This treatment has proved its value in rheumatism, gout, arthritis deformans, and neuritis to such an extent that physicians are justified in giving it a trial in every case that fails to yield readily to the usual remedies prescribed.

The treatment is given under the immediate direction of Dr. George F. Butler, who works only in co-operation with the patient's physician, thus giving the patient the benefit of his own physician's knowledge of the case, and insuring better results.

The "Mudlava Blue Book" is sent free to physicians upon application; and physicians are given a cordial invitation to visit Mudlava, which is located at Kramer, Indiana.

**Be Sure You Get
The Minneapolis Milk
Co's Bottling**



IT MEANS PURE MILK

Milk is the cheapest and best food on the market today, and every family can save money by using two or three times the usual amount consumed by the family. ¶ A perfectly pasteurized milk is perfectly free from all harmless germs; and no other milk should be used by either children or adults. ¶ Our milk is scientifically pasteurized at an absolutely uniform temperature as applied from day to day. Every process it goes through is an automatic process, eliminating every chance of contamination. ¶ Physicians can recommend it with certainty that it meets all their demands for purity and for uniformity in the elements that make milk an ideal food, both for the well and the sick.

METROPOLITAN MILK COMPANY

T. S. 33 377

900 SOUTH SIXTH STREET

N. W. Main 2348

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, APRIL 15, 1918

No. 8

SYPHILIS IN ITS RELATION TO FEEBLE-MINDEDNESS

By F. KUHLMANN, M. D.

Director of Research, Minnesota School for Feeble-Minded and Colony for Epileptics

ST. PETER, MINNESOTA

This and the following two papers were presented at a Conference of the executive officers of Minnesota State Institutions with the State Board of Control on February 5, 1918.—THE EDITOR.

This paper will discuss two aspects of the subject of syphilis in relation to feeble-mindedness. The first is syphilis as a cause of feeble-mindedness; the second is feeble-mindedness as a cause disseminating syphilis. The former is an old question, which has been discussed, with varying conclusions, ever since the first real efforts were made to determine any of the causes of feeble-mindedness; the second embodies a more involved problem, and interest in it is of relatively recent origin. The data presented here on either of these question can lay no claim to any semblance of an exhaustive summary of all the facts and opinions that appear in the very extensive literature on these two phases of this most intricate and far-reaching problem of syphilis. It is believed, however, that the general trend of our present knowledge of these subjects is correctly stated.

There never has been any doubt that congenital syphilis can and does cause feeble-mindedness in children. A disease with so many other serious consequences in children and adults alike can hardly be viewed in any other way, and especially not when it is present during a period of the child's life when all causes of feeble-mindedness are known to be most effective. Two direct

methods by which it may do so are noted: first, the germ cells of either parent may be impaired by the disease; secondly, the embryo may be infected by an infected mother. The former means is problematical; the latter is a known fact. While the possibility of syphilis being a cause is thus granted, the exact frequency with which it actually is responsible for feeble-mindedness is far from being determined. This question is complicated by a great variety of different factors. No statistics on the subject are capable of a simple interpretation, and the conclusions of different investigators range from the view that syphilis is almost a negligible factor in the causation of feeble-mindedness to the view that it is the determining cause in nearly one-fourth of all existing cases. While the truth, as usual, undoubtedly lies somewhere between these two extremes, the extremes are so far apart as to make this knowledge of no great value.

The statistical approach to this question has been in the attempt to determine what percentage of the feeble-minded are syphilitic. Investigations of this sort have been quite numerous. I will quote the results of some of these, and then devote most of my time to their interpretation.

Statistical studies may be sharply divided into two classes: the older studies made before the discovery of the Wassermann test for syphilis, and the more recent studies made by means of the Wassermann test and its modifications. There

is no comparison between the number of cases that give a positive Wassermann and the number that have unmistakable clinical symptoms of syphilis. But, since we have some idea of how big this difference is in general, the older statistical studies on the frequency of syphilis with the feeble-minded still have some interest. I shall not go into the details of these older statistics based on clinical symptoms and family histories only. The percentage of the feeble-minded that is revealed as syphilitic in such studies is very small, usually only about 1 per cent. Shuttelworth, reporting on 2,380 cases, gives 1.17 per cent. But the majority of the congenitally syphilitic do not show any unmistakable clinical symptoms of the disease as adults. The present methods of diagnosis have abundantly shown this fact. We now know that these older observations revealed but a small portion of the existing cases of syphilis.

Wassermann tests have been made in great number on the feeble-minded of all ages, both in this country and in Europe, during the last decade. It will not be necessary for our present purpose to summarize these studies at length. Most of such studies had for their chief, if not sole, object the determination of the percentage of the feeble-minded that are syphilitic; and they show but little uniformity in the percentage found syphilitic. The following table gives the results of a number of Wassermann studies, arranged according to the percentages found giving positive reactions:

Authors	Number of Cases	% + W. R.	Date
Thomsen		1.5	1911
Clemenzen	916	2.0	1913
Bruckner	138	4.3	1912
Thomas		4.8	1913
Dawson	1,113	5.	1914
Kellner	216	7.	1909
Moulton	600	12.8	1914
Lipmann		13.2	1913
Atwood	204	14.7	1910
Dean		15.4	1910
Gordon		16.5	1913
Krober		21.	1911
Roviar		30.	1909

These data do not permit computing an average that could be regarded as a reliable indication of the exact general frequency of positive Wassermann reactions with the feeble-minded in general. Taking them as they are, they show a general frequency of about 10 per cent. If we take this

as correct, how is this 10 per cent to be interpreted? Many of the authors of the Wassermann-test studies on the feeble-minded make no attempt at all at interpretation. Practically none make a careful analysis of results and conditions in order to arrive at a trustworthy conclusion as to the part syphilis may play in the causation of feeble-mindedness. Some venture conclusions without mentioning any of almost a score of factors that must be taken into account. A brief statement will show what some of these factors are. They may be summarized under three headings or questions: (1) If the feeble-minded of both sexes and all grades and ages show a given percentage of positive Wassermann reactions in such investigations as the above, what indication is this of the percentage that would show positive reactions at birth? It is agreed, I think, that we may limit ourselves to congenital syphilis in discussing the question of syphilis as a cause of feeble-mindedness. (2) How accurate is the Wassermann test as a method of detecting syphilis? (3) Given a certain percentage of syphilitics among the feeble-minded in general, what conclusion can be drawn as to syphilis as the cause of the feeble-mindedness? These three questions will be considered in order.

1. (a) The first consideration is the fact that a Wassermann reaction being regarded positive or negative in any significant degree, is in many cases a matter of the observer's judgment. Moulton is among those who stress this point. "The results of these tests," he notes in regard to his study, "show that of the 600 specimens examined, 523, or 87 per cent, showed complete hemolysis, ranging from complete arrest to a mere trace of inhibition It seems to be the general opinion where we have not over 10 or 15 per cent hemolysis we can in the presence of suspicious clinical conditions consider the person luetic, but how about the others?" Investigators, in reporting their results, have not always stated just what constitutes a positive reaction in their data.

b. Some investigators have noted in these tests on the feeble-minded that the percentage of positive Wassermann reactions decreases with age. Thus Thomsen, Boas, Hjort, and Leschly, in examining 2,061 feeble-minded of all ages, found only 1.5 per cent giving a positive reaction. But in taking children that were ten years or less of age alone they found 3.8 per cent giving positive reactions. Of 462 feeble-minded aged over twenty years Clemenz found 1.1 per

cent giving a positive reaction, while of 462 aged below twenty years, 3 per cent gave a positive. Re-examinations of the same persons at different ages have also shown that some may give positive reactions first and negative reactions a few years later, without intervening antisyphilitic treatment. In this connection it may be noted, further, that known congenitally syphilitic persons tested at birth give positive reactions, practically without exception. When, therefore, a group of persons of all ages are given Wassermann tests we can be certain that a number of these giving negative reactions would have given positive ones had they been tested younger. As yet there is not sufficient evidence to show what proportion become negative of those who would test positive at birth.

c. When older persons are tested no account can be taken of the number who may have acquired the disease at any age after birth, and acquired syphilis can be ruled out, practically entirely, as a cause of feeble-mindedness. Some authorities think that as high as 25 per cent of all acquired syphilis is acquired innocently, which would, therefore, apply to children, as well as to adults. Again, feeble-mindedness, sex immorality, and acquired syphilis are closely associated in the cases of adults. Probably many adult feeble-minded giving positive Wassermann reactions have acquired syphilis through immorality.

d. Lastly, the death-rate among all syphilitic children is enormously high. Engel-Reimer (quoted by Clemenz) found that 72 per cent of congenitally syphilitic children died in early infancy or before. Of 2,038 syphilitic children in Moscow 70 per cent died before they were six months old. In Fournier's experience 60 per cent of syphilitic children found in private practice died, while 85 per cent found in the hospital died. The fact of this very high death-rate among syphilitic children is, obviously, of great importance in interpreting the meaning of any given percentage of positive Wassermann reactions in any group of feeble-minded of all ages. If syphilis were not a cause of death at all among children, evidently the percentage of syphilitics among the feeble-minded in general would be about three times as great as it is. In other words, the possibility of syphilis causing feeble-mindedness is reduced about 75 per cent by the high death-rate.

2. A word only is necessary in regard to the reliability of the Wassermann tests. Ulrich's summary of statistics and conclusions on this point indicates that practically 100 per cent of

the congenitally syphilitic will give a positive reaction if tested at birth. If limited to persons that have not had any antisyphilitic treatment, the same holds true in almost equal degree of older cases in which the disease is in one or other of the so-called primary, secondary, or tertiary stages. With the disease in the latent stage, however, Ulrich's summary gives only from 40 to 70 per cent positive reactions. It need only be added, on this point, that in the great majority of cases of syphilis in feeble-minded in general in institutions the disease is in the latest stage.

There are a few diseases, other than syphilis, and some even normal conditions, that are claimed to give positive Wassermann reactions sometimes. But since these are, on the whole, all such as are not likely to have been present among the feeble-minded giving positive reactions, they need not be discussed here.

3. All of the above considerations concern the question of how many of the feeble-minded we may regard as syphilitic at birth when we have before us only the Wassermann reactions of tests made later. Assuming now that the percentage of congenitally syphilitic among the feeble-minded is determined correctly, what conclusions can be drawn as to syphilis as the cause of the feeble-mindedness? A few quotations from conclusions arrived at by different writers will suffice to show how varied and extreme opinions are on this point. "It has long been recognized," says Atwood, "that syphilis plays an important rôle in the causation of idiocy and the arrest of brain development." "Of all the causes" [of feeble-mindedness], says Goddard of syphilis, "there is perhaps none for which there is less evidence." "In most cases," conclude Bruckner and Clemenz, "the demonstration of the presence of syphilis explains the cause of the feeble-mindedness." "I am inclined to think," says Tredgold, "that the proportion of cases [of feeble-mindedness] so arising [that is from syphilis as the sole cause] is relatively small, and in the majority of patients in whom syphilis is present other factors will be found in addition, generally a neuropathic inheritance." Tredgold calls attention to at least one factor which it is of the first importance to take into account in trying to evaluate the presence of syphilis as a cause of feeble-mindedness. This is heredity. It has long been known that in the majority of cases feeble-mindedness is due to inheritance. The more data we have been getting on this subject, the higher has risen the estimated percentage of hereditary feeble-mindedness, until at present it

seems certain that in more than 75 per cent of the cases the disease is hereditary. Our statistics on the feeble-minded that are syphilitic do not show what proportion of them had also a bad heredity. The supposition may be entertained that over three-fourths of them come from poor stock, as well as being syphilitic. While heredity is by far the most important factor associated with syphilis as the possible cause of the feeble-mindedness in the syphilitic feeble-minded, there are, of course, a number of other factors which are looked upon as causes of feeble-mindedness. In order to be able to interpret our statistics properly it is necessary at least to have a complete analysis of each case. We must know all the other factors that were present in the syphilitic cases in order to judge correctly the part syphilis alone may have played.

There is one more matter that calls for consideration. This is the frequency of syphilis in the general population. If 15 per cent of the feeble-minded were found to be syphilitic, and 10 per cent of the general population were found to be affected by the same disease, one might be tempted to conclude on first thought that the difference between these two figures, or 5 per cent, represented the frequency with which syphilis causes feeble-mindedness. I shall show in a moment that even this would be attributing much too much to syphilis. But before coming to that point it may be noted that our present studies on the frequency of syphilis in the feeble-minded do not afford any deduction from the number of feeble-minded found syphilitic because of syphilis in the general population. The latter is, of course, very difficult to determine in any satisfactory way, since our conclusions must necessarily be based on estimates on the basis of limited observations. I have not surveyed the literature to find out what is really known on this subject, but here are a few suggestions. Powers and Murphy (*System of Syphilis*, 1908), on the basis of clinical observations only, found 0.6 per cent undoubtedly syphilitic, and 1.5 possibly syphilitic of 4,830 out-patient children under ten years at King's College Hospital. Fields found 1.3 per cent of 1,015 infants at the London Hospital giving positive Wassermanns. In 3,000 obstetrical cases at Johns Hopkins Hospital Urquart found 8 per cent still-births, over half of which were syphilitic cases. Counting in the syphilitic children born alive, he concludes that 5 per cent of these 3,000 women had syphilitic children. Since, in many cases, the children of syphilitic women are not syphilitic, the frequency of syphilis in

the general population must, of course, be regarded as considerably higher than these few figures indicate. This agrees with estimates made by others on the basis of other observations. Thus the Royal Commission on Venereal Diseases estimated that in the larger towns of England 10 per cent of the inhabitants are syphilitic. Garrish estimates that 10 per cent of the population of New York City are syphilitic, and that a higher percentage than this of the people of the United States show signs of the disease. (Quoted by Peacock.) Vaughn, basing his statement on inquiries made of Ann Arbor physicians, says that of 4,000 male students of Michigan University 200 or 300, or about 6 per cent, were syphilitic. Pusey of Chicago places the figure at 5 per cent for the adult population of the country in general.

These few suggestions suffice, at least, to make it clear that a considerable deduction must be made from the percentage of feeble-minded found syphilitic, because of the frequency of the disease in the general population, in order to judge correctly the influence of syphilis as a cause of feeble-mindedness, even when we assume that the feeble-minded are not more likely to be syphilitic than others because of their feeble-mindedness. But the latter assumption cannot be granted. The adult feeble-minded tend to immorality, and through immorality acquire syphilis. They produce children who are both feeble-minded and syphilitic more frequently than do normals primarily because they are feeble-minded; consequently the percentage of the syphilitic among the feeble-minded runs high because their parents tend to acquire syphilis, not alone because the syphilis has produced the feeble-mindedness.

We may now summarize the main points on the question of syphilis as a cause of feeble-mindedness:

1. The percentage of feeble-minded of all ages that give positive Wassermann reactions has been found in different groups to range from 1.5 per cent to 30 per cent.
2. To interpret the meaning of these figures one must consider the following facts:
 - a. The question as to whether a Wassermann reaction is to be called positive is in some measure a matter of judgment on the part of the observer.
 - b. Positive reactions tend to disappear as the patients grow older.
 - c. In a considerable percentage of syphilitic

feeble-minded the disease is acquired, and stands in no causal relation to feeble-mindedness.

d. The death-rate among syphilitic children is exceedingly high, decreasing to a very large extent the number of syphilitic feeble-minded that might otherwise exist.

e. In a considerable percentage of syphilitic persons when the disease is in the latent stage the Wassermann tests fail to give positive reactions.

f. The syphilitic feeble-minded may, and in the majority of cases undoubtedly do, owe their mental deficiency to hereditary and other causes present at the same time, rather than to the syphilis.

g. The frequency of syphilis in the general population seems to run nearly as high as it does in the feeble-minded.

With such a complexity of factors, it would be useless to attempt a conclusion as to the exact frequency with which syphilis causes feeble-mindedness. It is rather obvious that no exact statement can be made. The subject needs to be approached from another standpoint. Instead of giving Wassermann tests to the feeble-minded, one should gather observations on all children born syphilitic, to determine the percentage of miscarriages and still-births, and the percentage feeble-minded of those that survive. But, since the latter are never segregated, as are the feeble-minded, they are not so available for the purpose of observation.

The second general topic mentioned for discussion, namely, the feeble-minded as a source that spreads syphilis, can be disposed of in a very few words. Since all observers agree that, in the great majority of cases, syphilis is spread through immorality we need to determine the proportion of immoral persons that are feeble-minded in order to come to some conclusion on this question. This has been done in a number of instances for groups of immoral women. Unfortunately, the same kind of data for immoral men cannot be obtained. Apparently, as a rough estimate, Vaughn states that 33 per cent of the prostitutes in Detroit are feeble-minded. "Many competent judges," says Goddard, "estimate that 50 per cent of prostitutes are feeble-minded." Other observers make similar estimates. A number of careful individual mental examinations of different groups of prostitutes, however, have shown clearly that these estimates have been considerably too low. A recent Massachusetts Commission for the Investigation of the White Slave Traffic examined 300 prostitutes, and reported 51 per cent of them feeble-minded. Their report,

however, shows that a number of those reported normal had a mental age of nine to ten. Counting these as feeble-minded, as they must be, makes 63 per cent feeble-minded. The Chicago Morals Court at one time examined 639 prostitutes, finding 62 per cent feeble-minded. At another time this Court examined 126 cases, finding 85 per cent feeble-minded. The State Board of Charities and Correction, reporting to the Virginia Legislature, states that of 120 prostitutes examined 72 per cent were found feeble-minded. No investigation involving an individual mental examination of any group of prostitutes that reports less than 50 per cent of them feeble-minded, has come to my notice. It is evident that prostitution has its basis essentially in feeble-mindedness. If the feeble-minded were eliminated any extensive White Slave traffic would be impossible.

This, however, does not of course tell the whole story, since immorality among women is much more widespread than common prostitution. Since there is no means of determining how much immorality of the latter sort there is, no means are available by which we can determine how much feeble-mindedness contributes to it. The probability is that feeble-mindedness is not nearly so frequent here as it is among common prostitutes. These facts introduce very large uncertain elements which make definite conclusions impossible. It would seem a safe estimate, however, to say that the feeble-minded are responsible for nearly 50 per cent of immorality among women. From this it follows, further, that, if the feeble-minded women could be protected, it would be one of the most effective means of checking syphilis in the general population.

BIBLIOGRAPHY

1. Abbott, A. C.: *The Hygiene of Transmissible Diseases*, Philadelphia, 1901.
2. Attwood, Chas. E.: *Idiocy and Hereditary Syphilis*, Journ. Am. Med. Assn., 1910.
3. Bruckner & Clemenz: *Ueber Idiotie und Syphilis*, Ztschr. f. d. Erforsch. u. Behandl. d. jugendl. Schwachsinn, 1912.
4. Clemenz: *Syphilis bei Schwachsinnigen*, Ztschr. f. d. Erforsch. u. Behandl., Schwachsinn, 1913.
5. Dawson, W. J. G.: *A Preliminary Report on Wassermann Tests*, Journ. Psycho-Asthenics, 1912.
6. Dawson, W. J. G.: *Additional Reports on Wassermann Tests*, Journ. Psycho-Asthenics, 1914.
7. Dean: *Lancet*, 1910.
8. Goddard, H. H.: *Feeble-Mindedness: Its Causes and Consequences*, New York, 1914.
9. Gordon: *Lancet*, 1913.
10. Henniger, C. H.: *The Feeble-Minded Outside the Institution and Their Relation to Society*, Journ. Psycho-Asthenics, 1912.
11. Kellner, Clemenz, Bruckner und Rautenberg: *Wassermannsche Reaktion bei Idiotie*, Deutsch. med. Wchnschr., 1909.
12. Krober: *Med. Klin.*, 1911.
13. Lipmann: *Ueber die Beziehungen der Idiotie zur Syphilis*, Deutsch. Ztschr., f. Nervenh., 1910.
14. Moulton, A. B.: *Wassermann Tests: 600 Cases of Feeble-Minded*, Journ. Psycho-Asthenics, 1914.
15. Peacock, Lieut. A. H.: *The Problem of Social Diseases in the Modern Army*, Northwest Med., 1918.

16. Powers and Murphy: System of Syphilis, 1908.
17. Raviart: Rev. de méd., 1909.
18. Rehm, O.: Bedeutung der Syphilis, Aetiology bei idiotischen, schwachsinnigen und psychopathischen Kindern, Ztschr. f. d. Erforsch. u. Behandl. d. jugendl. Schwachsinn., 1912.
19. Shuttelworth, G. E.: Inherited Syphilis as a Factor in the Aetiology of Mental Defects in Children, Brit. Jour. of Child. Dis., 1909.
20. Thomas: Eng. Report Lunacy Commission, 1913.
21. Thomsen, Boas, Hjørt u. Leshly: Berl. klin. Wehnschr., 1911.
22. Tredgold, A. F.: Mental Deficiency, New York, 1914.
23. Urquhart, R. A.: The Relation of Syphilis to Infant Mortality, Conference of Am. Acad. of Med., 1909.
24. Vaughn, V. C.: Race Betterment, Jour. Psycho-Asthenics, 1914.
25. Weidensall, Dan: Mentality of Criminal Women, Baltimore, 1916.
26. London Letter, Jour. Am. Med. Assn., 1915.
27. Mental Defectives in Virginia, Spec. Report of State Board of Charities and Correction to General Assembly, 1916.
28. Report Mass. Com. for Invest. of White Slave Traffic, 1914.
29. Symposium on Syphilis, Jour. Am. Med. Assn., 1917.

SYPHILIS IN ITS RELATION TO INSANITY

By R. M. PHELPS, M. D.

Superintendent, St. Peter State Hospital

ST. PETER, MINNESOTA

This subject, while largely a medical one in its judgments, I shall here try briefly to outline, confining myself to the items which bring it into the field of social and individual welfare. Though the subject seems to reach vaguely back into written history, yet, kept as it has been more or less from open discussion, it gives probably as much of evil effect now as it did centuries ago. The division of the subject I am to consider is only the relation of this disease to insanity.

During the past ten years about all doubt that paresis, or, as it was often called, "softening of the brain," is due wholly to syphilis, has disappeared. By this I mean that a man never has paresis unless he has had a precedent syphilis,—and *not* that every case of syphilis produces a paresis. Previous to the last decade, it was believed that some of the cases were probably of other origin; but the discovery of the germ, not only in syphilitics, but in paretics, has gradually dissipated this belief. There is, however, a complete lack of adequate reason why some cases of syphilis end in paresis and others do not. A great majority of the cases, however, do not, even if the patients live long enough, so develop.

Paresis is a more definite disease form than other types of insanity, having a fairly definite beginning, proceeding through various stages, and growing worse till the death of the patient. Death is far more certain than in a case of tuberculosis. Death will occur, on an average, in somewhat less than two years after the patient enters the hospital, though patients have lingered for five, or even ten, years. There is a gradual decline with certain peculiarities that need not be outlined here. The patient usually declines to a rather animal-like existence toward the last.

Now, the number of paretics is large. Statistics concerning numbers are obtained almost ex-

clusively from hospitals for the insane, but there is no hospital which does not get some of these cases. The percentage is based on the proportion of paretics to the whole number of insane admitted, and varies considerably. Some sixty-two hospital reports, hastily canvassed, show a maximum record of 1 paretic to every 6.1 patients admitted, or 16.4 per cent, and a minimum of 1 to 158, or 0.06 per cent. But most hospitals list between 1 in 10, or 10 per cent, and 1 in 20, or 5 per cent. To make this a little more precise, sixteen institutions show more than 10 per cent, and fourteen show less than 5 per cent. Seven show less than 3 per cent.

It has been argued that patients drawn from a large city population show a greater proportion of paretics; and this is, in general, upheld by statistics. This is based on the idea that a city population has a larger number of syphilitics, which is also supposably true. In the list of hospitals quoted from, Manhattan Hospital, adjacent to New York City, received 16.4 per cent of paretics; Pontiac, near Detroit, Mich., received about 14.3 per cent; and the Chicago State Hospital, about 16 per cent, all these being a larger proportion than that shown by the other hospitals of the same state. In a review concerning conditions in Scotland, in the *British Medical Journal* of December 21, 1914, it is reported that Garloch Asylum shows 20 per cent of paretics among men, while one of the County Asylums claims not to have received a single case, except as contracted outside its territory.

Of course, not all patients with paresis in Minnesota enter the State Hospitals, yet there is reason to suppose that nearly all do. Some go to private hospitals, and a few are cared for at home.

But not all syphilitics with brain trouble are

among the paretics. Under the heading, "syphilitic brain disease" or "organic dementia" are other patients in whom syphilis is clearly indicated as a cause. Taking them all together, I have been accustomed to say that, as a general estimate, 10 per cent of all patient admissions are these syphilitic cases. But during the past four or five years, the use of the Wassermann test has shown that syphilis, as a past or present disease, is far more prevalent than had before been known; and this is also true among the insane. A considerable number of the insane, aside from the known cases of syphilis above quoted, show a positive Wassermann reaction. These include various forms of insanity. Large numbers of statistical groups have not been published as yet, but, where tried generally, there have seemed to be indicated some 5 per cent to 10 per cent of the remainder of the insane population. But no one as yet has ventured to say that in all these has insanity been caused by the preceding syphilis. The logical objections to such a statement are about as follows:

1. The Wassermann reaction is not yet a sure evidence of syphilis when present, and still less against syphilis when absent. It is true a large percentage of positive Wassermans are certain evidence; yet there is need of other evidence for particular cases. Confirmatory tests of finer definition are claimed, but statistics based on them are not yet extensive in statistical groups.

2. Admitting the test to be certain, there is no surety that the following insanity is caused by it or in any way dependent upon it. Insanity is so prevalent that any causal connection is based on a very slight degree of probability.

3. It is coming to be realized that a positive Wassermann is common in persons not insane; but opportunity to obtain general percentages of large groups has not yet been found. The conclusion is based largely upon those coming to hospitals for other troubles, and to a few collections in some homes for delinquents.

In spite of these drawbacks it is yet quite clear that syphilis tends directly and indirectly to affect the nervous system, and there is still left a certain amount of probability that it may be a cause which is the over-balancing element toward mental disease in those patients who do not directly show effects of syphilis. Yet no positive statements are at this time possible, nor are there any statistics. In an article in the *Journal of the American Medical Association* of last October, Dr. Alfred Gordon goes over the subject and dis-

cusses the probabilities. He finds a few cases of insanity during the acute stage of syphilis of which he is quite sure, yet of the others he admits only a vague probability. He also finds very little literature showing a study of this phase of the problem, which is not surprising perhaps, for until very recently we have had no tests by which it could be approached, and even now we hardly see any method of making sure decisions.

A few hospitals for the insane have begun making routine Wassermann examinations of all in-coming patients; and, as above stated, they have found positive reactions among many others than the known paretics and syphilitics. Other than the fact of finding the positives, no startling statement of any value is found. The largest number I find quoted is in the report of the Petersburg (Virginia) Hospital, just out, which, while not giving numbers, yet states that they examined all the resident population, of whom probably not over 1 per cent were parietic, and found from 25 per cent to 30 per cent as positive. On the other hand, the Morris Plains Hospital of New Jersey, which has a eugenic department, reported in 1914, that 2.5 per cent of patients recently admitted gave positive reactions, after excluding the syphilitic psychoses. In 1916 Dr. Holbrook of the East Louisiana Hospital reported that in 515 admissions 17.4 per cent were infected, of whom 11 per cent were parietic. Contrary to all other ordinary statements as to sex, he found the colored women to show a greater percentage than the men. His percentages, excluding paretics, were as follows: white men, 2.8 per cent; white women, 1.8 per cent; colored men, 2.6 per cent; colored women, 17.4 per cent. It is usual to find from two to six or eight times more infection among men than among women.

It seems difficult to find other statistical statements; yet from some references it would seem that some investigators are finding up toward 5 per cent among the general insane, not paretics, as showing evidence of having had syphilis. Larger percentages have been found among collections of epileptics and feeble-minded.

To a non-medical audience it is needful to specifically state that there is no claim that all syphilitics will become parietic, even if they live long enough ordinarily to do so; and the majority of syphilitics do not. Exact statistics are not possible. It has been said that not one out of ten will so end. But even this is a wild statement, and, if the positives found are all credited, it is probably too large a percentage. Nor can we

find in the literature anyone making positive statements as to why certain ones so fail while others do not. It is believed, of course, that an untreated case will be more apt to fail, but even this seems not always true. Syphilis in its later stages does not always select the brain, but the reason for its selection of one site or another is not known.

The general picture here drawn of a man with a syphilis long gone by and perhaps quite forgotten, developing this disease is very depressing. This rarely occurs before five years after the initial disease; and at times the final result comes as long as twenty years later. This persistent lurking of a disease in the system is not common; and the unexpected development in an active and healthy looking man always brings dismay to those watching it.

But probably the most startling facts could be

found as to the number of positive tests among the general population. It is hard to collect such statistics, but, this is not part of my subject. The war has been dragging this subject half unwillingly to the surface; yet the subject is old, both as a peace subject and as a war subject, and is exhibited in every city in the country. It is even doubtful that the disease is increasing. The main fact lies in its being pushed into public notice. The one strong ray of light in the gloom, is seen in the opinion that, far beyond tuberculosis, typhoid, or pneumonia, the prevalence of syphilis can be lessened by governmental preventive measures. The prohibition of liquor alone would probably prevent a large share of syphilis. But an aroused public sentiment is needed to secure such action, and to stand back of governmental actions in this direction which for so many years have been slight and half-hearted.

SYPHILIS IN ITS MEDICAL, ITS GENERAL, AND ITS SOCIOLOGICAL ASPECTS

BY L. G. ROWNTREE, M. D.

Professor of Medicine, University of Minnesota

Syphilis is an infectious disease acquired by contagion or transmitted through inheritance. Its signs and symptoms are protean, bizarre, and yet they are exhibited in determinate order, so that it is possible to recognize various clinical stages of the disease. It presents early local and late constitutional manifestations.

The history of syphilis is to my mind the most interesting with which we have to deal in the whole realm of medicine. We know absolutely nothing authentic on this subject prior to the end of the 15th century. In 1493 Charles the Eighth had an army of French soldiers stationed in Naples. It was claimed by the city that the army syphilized the city; and, vice versa, it was claimed by the army that the city syphilized the army. Be that as it may, we know that, starting in Naples, syphilis spread like a prairie fire upwards through Italy, around Switzerland, into France, into Germany, and into Great Britain. Before the century ended, all Europe was under its scourge. As is so frequently the case with a disease in virgin soil, it presented its very worst form in the beginning. It was a great plague, causing virulent ulcers, destructive sores of the most hideous types of skin lesions. It deformed, rendered hideous, and killed its victims in tre-

mendous numbers. No one escaped; everyone, from the kings on the throne to their lowest subjects, developed syphilis.

It is interesting to note that at this time each country blamed its origin on some other country. The French liked to call it an *Italian* disease; the Germans, a *French* disease; and so on. Europe today does not wish to stand responsible for its origin, so they are doing now what the various countries did then. They suggest that it came from another continent, from Africa, as an evolutionary form of yaws, a disease which flourished in Africa and which has as an etiological factor, an organism very similar morphologically to that of syphilis. It has been claimed, also, that it arose in America; that it was brought back by Columbus and his sailors; that Barcelona became infected, and, through Barcelona, the disease reached Naples. We know nothing as to the truth of these claims.

Did it exist prior to this time? We have no authentic information concerning it prior to the great epidemic. It was thought that the venereal diseases,—syphilis, gonorrhea, and soft chancre,—were all manifestations of one disease. It was not recognized that they were different diseases. Two centuries later, John Hunter, the greatest English surgeon of his day, believed that these

diseases were separate entities, and he attempted to prove the same by inoculating himself with the pus from a patient with gonorrhea. Unfortunately, he selected a person who, unknown to him, had syphilis. He developed the disease himself, and later died from the results of this experiment.

We have in the first stage of syphilis and the chancre a local lesion, appearing usually within a month from the time of exposure. Then we have the so-called secondary stage, which usually appears within three months. Fever, anemia, skin lesions (syphilitic rash), and lesions of the mucous membrane and mucous patches, and a disease of the eye (iritis), go with this stage of the disease. This stage lasts for a varying time, sometimes months; but sometimes a latent period of years or even of decades may intervene before what is known as the third or tertiary manifestations appear. These consist largely of skin lesions,—new-growths akin to tumors, and known as gummata,—and of degenerative changes in many tissues, but particularly in the cardiovascular and nervous systems. And in some instances we have coming still later what are known as the manifestations of the fourth stage, conditions frequently spoken of as parasyphilis or metasyphilis, locomotor ataxia, and general paralysis of the insane, and cerebrospinal lues. It is evident, therefore, that syphilis is a disease which is chronic in nature, and that it may show many manifestations in various tissues and organs at varying periods.

We have made more progress in our knowledge of syphilis in the last fifteen years than in all the time prior to 1900. During the last fifteen years we have had three or four epoch-making discoveries in regard to syphilis, and several other discoveries of very great importance. Let us consider these.

In 1905 Schaudinn and Hoffmann discovered and established the real cause, the true etiological factor, of syphilis. There had been one hundred and twenty-five causes discussed prior to that time, but in a very simple manner they demonstrated, beyond a shadow of doubt, the relationship between the *treponema pallidum* and syphilis.

Following this, we have the successful transmission of the disease to animals. This is the surest way to obtain a successful treatment in any disease. It seems peculiar, perhaps, to make such a statement; but, I repeat, the surest way to the rational treatment of any disease is the production of the disease in animals, for under

these conditions all factors can be controlled absolutely and at will. Hence it is possible to do as one wants to do, without risk. Consequently it is possible to experiment and to arrive more quickly at a rational and sane treatment.

Following this, Wassermann, a German worker, discovered a method whereby it is possible to recognize syphilis in any form at any stage. There are frequently great latent periods in syphilis during which there are no active manifestations whatever, and the patient and his physician are apt to consider the patient free from the disease. Nevertheless, a very slow process may be going on, of a true latent period, which will be followed later in life by dire consequences. The Wassermann reaction brings to light syphilis otherwise hidden from the physician.

Following this Ehrlich discovered, through a carefully planned research, a substance which can cure syphilis, or, at least, which can very rapidly remove its manifestations, rendering the patient harmless to others. His discovery effects cures in a certain selected group of cases of syphilis if given very early, but does not cure the disease in all stages.

These, then, are the four great epoch-making discoveries since the year 1905. In addition to these, we have other discoveries of very great importance to medicine.

I would place first, perhaps, a new mode of recognizing the spirochete. Instead of the ordinary microscope, what is known as the dark-field-illumination apparatus is used, making it possible to recognize the spirochete or *treponema* without difficulty. The organism can be obtained from the initial local lesion and from the early manifestations of syphilis, such as mucous patches and condylomata. This is important because it means that syphilis can be recognized early, and can be treated early, the time when the treatment is of the greatest importance.

Also, Noguchi has succeeded in growing the organism of syphilis *in vitro*,—that is, outside of the body.

Finally, we know now with certainty that some of these diseases, which we called parasyphilitic and which we thought to be due to syphilis, are actually due to syphilis. The organism has been demonstrated in the lesions which accompany and underlie these diseases.

In my work I see only the late stages of syphilis. It is the rarest thing to find a case of early syphilis,—that is, the first or second stages,—in our general hospitals. Hospitals will not knowingly accept cases in these stages, yet that

is the all-important time from the standpoint of treatment. When the later lesions arrive, the patients are admitted in great numbers to all our hospitals and to all our institutions throughout the country. They are admitted too late. Treatment is started too late.

The organism of syphilis is probably the most versatile organism with which we have to deal in the field of medicine. It has only one competitor, the typhoid bacillus. The latter does its work in a very workmanlike manner, and "finishes the job" one way or the other within a very short time, as a rule. Consequently it has called to itself the attention of all the health authorities the world over. They are engaged in preventing typhoid, and with success, too. We have had, in the wards of the University Hospital, not more than twelve cases of typhoid fever in two years, while we have had hundreds of cases of syphilis in the wards during the same time. Although the treponema is equally versatile with the organism causing typhoid fever, it works more slowly. Years may elapse, whereas months suffice for the typhoid organism, before the direct consequences of the treponema are manifest. Consequently the latter has not received the attention which it should. The spirochete should be dealt with by the Board of Health; and it presents a larger problem than the typhoid bacillus.

I have been interested in the development of the Social Hygiene Commission in this state. I firmly believe that the greatest medical problem facing this and every country today, in war or in peace, is the control of venereal diseases. The greatest medical problem of today is the control of syphilis.

Can we treat syphilis successfully? Yes and no. If we take syphilis in the early stages, in its first manifestations, and give thorough, long-continued, and intensive treatment, we can say, without a question of doubt, in the vast majority of cases, that we can cure it, hold it in control; but where it goes on and manifests itself as general paralysis of the insane, more treatment for a much longer period accomplishes practically nothing.

I have come to the conclusion that we are from one to forty years too late in our treatment of syphilis. If we had spent one-fifth of the money and one-fifth of the energy in dealing with syphilis in its early stages that we are spending now in its later stages, we should have accomplished results infinitely greater. It is this idea which is

responsible for the creation of the Minnesota Social Hygiene Commission, just recently organized.

There are two great problems facing anyone attempting to interest the State in the treatment of syphilis in the early stages. What are they? The first is the need of statistics. Syphilis is a secret disease. A great many individuals take no treatment; and a great many take treatment for an insufficient period of time, and then disappear from sight. The latent period of syphilis is reached, and treatment is not considered necessary until parasyphilitic diseases develop later in life. It is not a reportable disease, although it is an infectious disease. We have practically no data. If the Safety Commission or any other intelligent body is approached for funds for the fight against syphilis, the question is immediately asked, "What is the prevalence of syphilis?" Nobody knows. "Is there any possibility of getting at it?" Not with accuracy at the present time. One can, of course, get certain ideas, surveys and estimates.

For instance, more than 13 per cent of the patients admitted to the University Hospital in the last six months have had syphilis, and up to 5 per cent more are not above suspicion. A small survey was made in the Peter Brent Brigham Hospital in Boston. Of the 4,000 patients admitted, 15 per cent had positive Wassermann evidence of either active or latent syphilis.

Dr. Irvine, who has been in charge of the syphilis clinic in the University Dispensary, and who has just returned from California, where he has been working along the lines of control of venereal diseases, made an estimate of the cost of taking care of the syphilitic insane of Minnesota. He totaled the number of insane in the various state institutions, and the incidence of positive Wassermans from the Fergus Falls State Hospital, where Wassermann tests had been made routinely. He estimated the cost of taking care of the syphilitic insane in Minnesota to be \$160,000 to \$200,000 annually. More recently he has secured the actual figures from the insane asylums of California (not an estimate), and finds that the cost is \$160,000 to \$170,000 a year for the care of the syphilitic insane alone.

Statistics such as these are necessary before we can center the interest which we must center on syphilis if we are to control it at the proper time, namely, in its early stages.

The second great need is accurate records. In every institution dealing with the sick, generally

with the insane, or with individuals affected with syphilis, we need accurate records of the existence of syphilis in the institutions.

I am firmly convinced that we can have, here and now, the greatest epoch in the history of medicine. We must combat syphilis in its begin-

ning stage, and we must prevent it altogether. The work which the Minnesota Social Hygiene Commission is attempting is a great step forward. We are building something now that will be permanent in the control of syphilis. We are building for eternity.

OPERATIVE PROCEDURE FOR THE RELIEF OF CONTRACTED SOCKETS

By FRANK ALLPORT, M. D.

CHICAGO, ILLINOIS

Operations for the relief of contracted sockets and extensive symblepharon have been marked by many disappointments. The ingenuity of surgeons has been taxed, and many operations have been proposed. Most of these operations have been endorsed by their proposers with reports of successes. I do not for a moment doubt the truthfulness of these reports, and it is probably owing to my lack of understanding or surgical skill that most of these operations have, in my hands, resulted in failures.

For instance, I lately became quite enthusiastic about an operation proposed by Verhoeff, which seemed to me easy and logical. In this operation the orbital cavity is enlarged to its fullest capacity by removing all scar-tissue and undermining the conjunctiva so that it will expand away from all uncovered areas. A Thiersch graft is then carefully laid upon a double sheet of Cargile membrane and accurately wrapped around a large glass ball, which, if possible, expands the orbit to its fullest capacity. The ball, the membrane, and the graft are then carefully inserted into the socket. In five or six days the ball is removed, cleaned, and replaced in position. This should be repeated every two or three days. Verhoeff says that, at the end of two or three weeks, the ball may be removed permanently, and an artificial eye inserted.

I performed this operation in several very bad cases, in each of which the eyeball had been removed, and the socket contracted. I was delighted with the primary results. A large cavity was produced, beautifully lined with skin, but before long the socket contracted, in spite of the reinsertion of varying sizes of glass balls and varying sizes of artificial eyes, and eventually a condition worse than the original condition was produced. It was impossible to avert the inevitable contraction, and I abandoned the operation.

It would be unprofitable, and it is unnecessary, to enumerate the many operations that have been proposed for this deplorable condition. Suffice it to say that I have finally settled upon an operation that has proven very satisfactory to me and to my patients. I make no claims to originality in this operation, of course; but, owing to the unsatisfactory results obtained in most operations of this nature, I feel that perhaps I may profitably detail the various steps of the operation that has proven so successful in my hands.

Let us suppose that we have to deal with a case where the eyeball has been removed, and where complete cicatrization of both upper and lower lids has occurred. I have not found it necessary to make a canthotomy. I have found it best to operate upon one lid at a time, and I usually first select the lower lid. By incision with knife and scissors I completely open the lower portion of the socket and thoroughly separate the socket from the lower lid. I then wait until bleeding has entirely ceased. I cut a piece of block-tin in a half-moon shape so that it can be inserted into the lower portion of the socket. The piece of tin must be as large as can possibly be introduced. Five or six holes are bored then in the upper portion of the tin. I then make a very large, thin Thiersch graft—large enough to completely cover the tin on both sides. The graft is sutured to the tin by silk sutures, which are passed through both ends of the graft and through each one of the little holes that have been previously bored through its upper border. The graft has, of course, the raw side out. It is kept warm by several immersions in warm, sterile water. I then carefully force the graft-covered tin into the lower cul-de-sac of the socket, which has been previously opened, as hitherto described. I then suture the two lids together, in order to assist in holding the graft-covered tin in posi-

tion. It may be necessary to slightly undermine the upper lid in doing this, and I sometimes overlap the lower lid with the slightly undermined upper lid, running the sutures through the upper lid and through the skin covering the lower lid a little way down from the palpebral edge of the lower lid. I then make a small wad of gauze, and place it over the upper lid in such a manner as to assist in pressing the tin down into the lower cul-de-sac as far as possible. This is supplemented by more gauze and a tight bandage. The bandage is left in position for about two days, and then gently removed, the parts gently cleaned, and a fresh and similar bandage applied. I frequently remove the outside sutures, uniting the upper with the lower lid at the first dressing, but always do so, at all events, at the second dressing. After the first dressing the eye is dressed every day, care being taken to do it as gently as possible so as not to disturb the parts any more than is necessary. At the end of about six or seven days the sutures are all removed, and the lids separated as much as possible and gently irrigated. In seven or eight days the block-tin is very gently removed and gentle irrigation applied; the tin cleaned and replaced without sutures. This is done a number of times. Loose portions of unattached graft are from time to time very carefully and gently cut off with sharp scissors, being careful not to disturb the attached graft. Most of the graft will "take," but some of it, of course, will not. In most instances a very good lower cul-de-sac will thus be produced. The cul-de-sac should be carefully looked after every day; and, if a tendency exists for any re-attachment be-

tween the cicatricial tissue of the orbit and the newly formed lower lid, it should be gradually separated with a probe.

In a few weeks the same operation can be performed upon the upper lid. It not infrequently happens that minor operations of a similar nature should be performed upon portions of the upper and lower lid that seem to be unsatisfactory. As a rule, however, I have found that one operation upon the lower lid and another upon the upper lid are sufficient, but, if not, subsequent minor operations should be performed, as already stated.

In my hands this operation has proven almost always successful, and I may say that my colleague, Casey A. Wood, has also obtained the most satisfactory results from this operation. Of course, operations should not be performed until the orbital cicatrization has settled down into a permanent condition.

I believe that skin-grafts are much more successful than mucous grafts of any nature. I am well aware that skin-grafts are not ideal; they never look like mucous membrane, and they produce more or less irritation, but, nevertheless, they are, in my hands, the most satisfactory grafts.

This operation can also be performed in case the eyeball remains in the socket, but is adherent, to a greater or less extent, to either the upper or the lower lid. In such cases, of course, care must be taken not to injure the cornea by the block-tin, which must be shaped to avoid rubbing on the cornea.

STATISTICS OF THE MEDICAL RESERVE CORPS

BY LIEUTENANT HAROLD W. STONE

Camp Greenleaf, Chicamauga Park, Georgia.

From the frequent questions that all of us in this camp are receiving, it has occurred to me that some detailed information as to the officers in this camp, their number, ages, states from which they come, their specialties, their condition as to whether married or single, and finally their status with respect to the draft—all might possibly prove to be of some interest and perhaps of value, especially to any who are members of the Reserve Corps waiting to be called to active service and to that much larger class who expect or hope to join when their affairs at home permit them to do so.

These statistics are taken from the records of a single battalion, which probably is fairly typical of the camp as a whole. In this battalion, since its organization last July, 1917, there have been a total of somewhat less than 700 student officers (U. S. R.) entered for training. Of this number approximately 150 men are still in the battalion, the great majority of whom have been in training less than six weeks.

In an organization such as the Medical Reserve Corps, which numbers approximately 13,000 men in active service, it would be obviously fallacious to attempt any generalizations

from a statistical study of less than 700 men, and, accordingly, these figures are presented as being only possibly indicative of the facts pertaining to the U. S. R. as a whole.

As to their ages and marital condition, the following tables are self explanatory:

Table Number 1

Age	Total No.	No. married	No. single
22	5	3	2
23	8	1	7
24	18	1	17
25	27	11	16
26	40	13	27
27	58	20	38
28	58	28	30
29	50	19	31
30	47	23	24
31	32	18	14
32	35	20	15
33	25	13	12
34	26	18	8
35	17	15	2
36	26	20	6
37	21	16	5
38	27	23	4
39	19	15	4
40	17	12	5
41	17	13	4
42	16	14	2
43	13	12	1
44	19	13	6
45	19	18	1
46	7	6	1
47	12	11	1
48	9	9	0
49	7	7	0
50	5	3	2
51	3	3	0
52	5	3	2
53	2	2	0
54	2	1	1
55	1	1	0

Between the ages of 22 and 25 years, inclusive, it appears that 25.8 per cent are married and that 74.2 per cent are single. This proportion grows steadily in favor of the married men.

Table Number 2

Age	Per cent	Per cent	
Period	Married	Single	Total
22-25	25.8	74.2	58
26-30	40.7	59.3	253
31-35	62.2	37.8	135
36-40	78.1	21.9	110

41-45	71.4	28.6	84
46-50	86.	14.0	40
51-55	76.9	23.1	15

The states from which these officers come are next shown. It is of some interest as showing the highly cosmopolitan character of this battalion. It has no other value, and does not in any way represent the proportion of men in Federal service from the different states as the northern and western men in general are sent to training-camps closer to their homes.

Table Number 3

Alabama	37
Arizona	2
Arkansas	4
Colorado	3
California	4
Connecticut	11
Delaware	1
District of Columbia	7
Florida	3
Georgia	45
Illinois	17
Indiana	7
Iowa	4
Kentucky	30
Louisiana	16
Maine	3
Maryland	25
Massachusetts	15
Minnesota	4
Mississippi	19
Missouri	10
New Hampshire	1
New Jersey	37
North Dakota	1
North Carolina	34
New York	48
Nebraska	3
Ohio	23
Oklahoma	1
Pennsylvania	126
Rhode Island	3
South Carolina	18
Texas	21
Tennessee	49
Virginia	30
Washington	1
West Virginia	11
Wisconsin	5
Vermont	2
Porto Rico	1
Nicaragua	1

Of the 695 men in this battalion, 295 profess some specialty, the remaining 400 being general practitioners, or, at all events, not claiming to possess any considerable proficiency in any particular branch of medicine.

The specialties most in evidence are the following:

1. Surgery, a total of 91 professing proficiency in this branch, or 32.2 per cent of the 295

2. Internal medicine is less well represented in point of numbers, at least there being a total of 54 internists, or 18.3 per cent. There is, thus, a total of 50.5 per cent of all specialists who are either surgeons or internists.

3. There are 26 x-ray men, 9 orthopedists, 17 sanitarians, 16 genito-urinary men, 12 anesthesiologists, 33 eye, ear, nose, and throat men, and 46 men who represent various specialties, such as pathology, laboratory, pediatrics, tropical medicine, gynecology, and proctology.

The relation between the ages and specialization is shown to be as follows:

Table Number 4

Age Period	No. and Number	No. and per cent of Specialists	No. and per cent of General Practitioners
22-25	58	19, or 30.5%	39, or 69.5%
26-30	253	98, or 34.7%	155, or 65.3%
31-35	135	60, or 44.4%	75, or 55.6%
36-40	110	53, or 48.1%	57, or 51.9%
41-45	84	31, or 36.9%	53, or 63.1%
46-50	40	21, or 52.5%	19, or 47.5%
51-55	15	14, or 93.3%	1, or 6.7%

That any considerable proportion of the younger men here have been persuaded into the service through the fear or expectation of being drafted is at least questionable. There are, it is true, a few men here who have actually been drafted, and have even served some weeks as privates in the various cantonments. In most of these cases, however, an application for a commission has been made some time prior to the actual receipt of the draft notification.

Table Number 5

1. Average age of 213 officers entering the battalion before September 1, 1917.....34.11 years
2. Average age of 334 officers entering the battalion after September 1, 1917, and not at present in the battalion34.14 years
3. Average age of 152 men at present in the battalion, 90 per cent of whom have entered for training within the last two months...32.14 years
 - (a) In Group 1, there were 150 married men, or 70.42 per cent.
 - (b) In Group 2, there were 184 married men, or 55.09 per cent.
 - (c) In Group 3, there were 79 married men, or 51.97 per cent.

It is seen that, while the average age of the men who entered the battalion some months ago, was slightly higher than the age those at present in the battalion, the percentage of single men has risen sharply, and that of married men has fallen. This would, at first thought, suggest that the operation of the draft law was forcing a not inconsiderable number of the young and unmarried doctors into the service. This explanation will not appeal as being tenable to any who are acquainted, however casually, with the character and ambitions and real patriotism of those who are in the service. As men graduate from the medical schools or finish their internships in the hospitals, it has come to be the natural and logical thing for them to enter the service instead of going into practice and getting married.

In so far as the older men of the profession are concerned, men with well-established practices and considerable responsibilities in civil life, if members of this class did not feel that it was possible for them to enter the service in the earlier months of the war, many of them probably feel that their reasons for remaining out of it now are as cogent as they were then.

I think that no other class or profession can show such a high incidence of married men in the service.

CHOOSING A VOCATION IN LIFE*

By FRANKLIN R. WRIGHT, M.D., F.A.C.S.

MINNEAPOLIS

Science teaches that everything is the result of gradual change, that is, of evolution. This world of ours was not always what it is today. It was originally an uninhabited waste. Hundreds of thousands of years ago plant life appeared; and, through gradual development, we have the earth today covered by the various grasses and the wonderful and useful forests. We do not know how long animal life has been present on the earth, but we know that man is the result of evolution, that he has come up from some lower form, just the same as all other animals, through forces of environment, have gradually been modified and changed until they have assumed the forms in which we know them.

When man appeared upon the earth, his life was necessarily very primitive. It was a one-man existence. He did for himself and his mate, his family, the things which were necessary to provide them with maintenance. As the race gradually developed, certain conditions appeared where two men could work to advantage, then they would join forces. Circumstances arose where three or four men could work to better advantage than two. In this way, one man would become specially apt in some line of work, and he would be called to help his brother who needed this particular line of work. Another man would become skilled in another line, and he would be given this particular kind of labor. By this slow process of evolution, or development, have arisen the various vocations of life. At the present time we have men who follow the various professions,—medicine, law, dentistry, ministry, etc. We have other men who are mechanics, following the various mechanical trades, each one of these men specializing and training himself to do this particular line of work.

One of the grave questions which the parents of today have to solve is, What shall we make of our boys? what are they best suited for? how can they become the most useful citizens? Every father watches and studies his boys to find out to which one of the various vocations in life he is best suited, in order that he may become a useful citizen, and, when he takes his position in the world, that he may be able to best earn a maintenance for himself and family.

Parents spend hours and weeks of anxious

observation and study trying to decide this question for their boys. How many times have any of you heard a father or mother discuss the question, or even hint that the question as to what their girls are to become had occurred to them; what they are to study; what they are to do throughout their lives? Why is it that parents do not decide on a vocation for their daughters? This question is seemingly without answer. Still it is a fact that parents who are anxious that their boys each one should have a vocation in life, pay no attention whatever to their daughters. The girls of the family grow up in the house with their mother, and are taught the useful household duties, but no thought is ever given to a training in order that they may have a vocation. Now, why is this?

If we go back to primitive man, at the time when the race was developing, and we find that the men were developing along certain lines of work and that each one of these developed finally into a trade or a profession, and we look at the work of the women during this time, we find that they had the care of the household and the care of the young, while the care of the sick necessarily fell to them. So, through all the countless ages since the human race appeared on the earth, by the process of evolution the women have been developed to their normal vocation in life. They are by evolutionary development suited for certain things. Now, I do not mean to say that women cannot step out of these things, and meet with a certain amount of success; but I do say that there are certain natural occupations for women which have been developed by the slow process of evolution, and that for these occupations women are peculiarly fitted, and that their place cannot be taken by men any more than a woman can take a man's place at the mechanic's bench.

These natural occupations are the care of the household, that is, all the duties of the housewife. Since the race began, the women have had the care and training of the children, and they are therefore eminently fitted to be teachers of the children. The care of the needy, that is, the physically needy, has fallen to her lot. Man was too busy fighting the battles of life to give time and attention to these things. They have for ages been left to the women, and there has been

*Presented before the Graduating Class of St. Andrew's Hospital Training-School for Nurses.

developed in her a natural instinct, which tells her those things which will make a sick person more comfortable, and a natural intuition which tells her when this person needs care and attention. In other words, evolution has provided her with a natural instinct toward certain work, just the same as it has made certain men incline to do certain lines of work.

Now, I know that there are women who believe that woman is in all lines man's equal. There has developed a certain class of women who keep insisting, and sometimes very vigorously, that woman must be placed on a par in the world with man. This may be simply one of the steps of evolution, one of the things which in the future is to modify the human family so as to bring the capacity of the male and female more nearly on an equal. The present element by which these women are going to bring about this racial equality is the ballot.

We have a group of women who call themselves suffragettes, who believe that giving the women the ballot will right all the wrongs of the human race. These suffragettes, in my opinion, represent a group of women who have gotten out of their natural element. They have been so modified by the circumstances of their individual lives that, while they are female, they are no longer feminine in the sense that they are no longer distinctly interested in the things which have for countless ages made up woman's vocation in life. This group of women is made up of certain individuals who have made plans in life, the result of which are not what they anticipated. They are disappointed in what they have attained. Another group who made plans in life which were never carried out, feel the lack in their lives of the things which they had planned to do. There is probably another group who had their dreams in life, which never got so far as to be plans; and they know that they are not leading the life that a normal woman should lead, therefore they turn to these questions, or to their religion, in the hope that they will find in these things that something which they instinctively know has been denied them. The vast majority of women are not suffragettes, neither do they take advantage of the ballot when it is offered them. The percentage who do vote is astonishingly small. In the state of California there are 569,000 women who have the right to vote. Of this number, at the last presidential election, 8,000 cast ballots. This is less than 1.5 per cent. I think it is decidedly fortunate for the human race

that this group of women is surprisingly small, not because I believe any harm will come from giving women the ballot, but simply because they represent to me an abnormal type of woman. These women represent the disappointments of feminine life.

Hospitals, like other things, have developed by process of evolution. The first hospital of which there is any record was established in Syria. Tradition says that the hospital known as the House of Sorrow, was established in Tara, Ireland, 300 B. C. Christian workers became interested in the care of the sick. We find records of the establishment of hospitals to care for an epidemic as early as 252 A. D. A hospital was established by St. Basil at Cesarea in Cappadocia in 369 A. D.

A hospital was established in Alexandria in 610 A. D. At the same time three hospitals were established in Constantinople. The first hospital in Rome was established during the fifth century, Pope Symmachus building three hospitals during his reign 495 to 514 A. D. Hospital work has not been entirely developed by the Christians. Hospitals were built in Damascus by the Arabians as early as 707 A. D.

The oldest hospital which exists in the world today is Hotel Dieu, in Paris. This institution has been in continuous existence since it was organized, which occurred sometime between the years 660 and 800 A. D. The first hospital in England is St. Bartholemew's, which was established in the twelfth century. The second oldest in England is St. Thomas', which was established in 1215.

Of the European hospitals where American medical students have gone most, the best known are those of London, Paris, Berlin, and Vienna. The first of these hospitals is Hotel Dieu, in Paris, as stated above. Westminster in London was established in 1719, and Curs' Hospital, also in London, was established in 1722. The Charite in Berlin was established by Frederick II in 1710, and the Hamburg hospital was established in 1789. The General Hospital in Vienna, where many American students have studied, was established by Joseph II in 1784.

The first hospital on the Western continent was established in the City of Mexico in 1524 by Cortez. This hospital is still in existence. The second hospital established in America was Hotel Dieu, established in 1663, in Canada at Sillery, and was afterwards transferred to Quebec. Hotel Dieu was established in Montreal in 1664, and

the General Hospital in Quebec was established in 1693. The first hospital established in the territory of the United States was on Manhattan Island in 1663 by the East India Trading Company for the care of all their soldiers and negroes.

A hospital for contagious diseases was built in Boston in 1717. The cornerstone of Pennsylvania Hospital, of The Philadelphia Dispensary, of which Blockley Hospital is the successor, was laid in 1755, but the hospital was not completed until 1805. The first hospital in New York City was the New York Hospital, established in 1771. Bellevue was built in 1811, developing out of the infirmary attached to the New York Almshouse. The Charite in New Orleans was established as a privately endowed hospital by a sailor named Louis in 1720. It burned, and was re-established as the New Charite Hospital in 1786. The Massachusetts General Hospital was established in 1821.

Most of the early hospitals were connected with various other charities, and represented a union between the hospital, the almshouse, and the orphanage. The care of inmates of these institutions was given up mostly to the religious orders, and to such inmates as were able to work. These early religious orders were made up entirely of men; therefore, the early nursing was done by men. If we recall the evolution of the various vocations of men and women, we find that that of nursing, or the care of the sick, does not belong in the life of man. It is just as impossible to make a nurse of a man as it is to make a mechanic of a woman. The first introduction of women as nurses was in the Roman hospitals. Women were placed in charge of the obstetrical wards. These women were probably inmates of some division of the institution. We do not know this for sure. Care of this kind was necessarily very crude. Patients were neglected through the inability of the nurses more than from lack of good intention.

From this beginning of hospitals and nursing have come down to us, by the process of evolution through the years, our modern hospitals with their training-schools for nurses.

Modern nursing is of recent origin. The first training-school of which we have any knowledge is an American institution. It was organized by Dr. Valentine Seaman in connection with the New York Hospital in 1798. His work was largely connected with the maternity department. He gave a course of twenty-four lectures, including an outline of anatomy, physiology, and care

of children. We have no record that he ever graduated a class or offered a certificate or diploma at the completion of his course of lectures. The second training-school, and what claims to be the oldest one, in America, was developed by Dr. Warrington in connection with the Philadelphia Dispensary in 1837. Dr. Warrington, like Dr. Seaman, was interested in obstetrics. His training-school consisted largely in training nurses in this line of work. He gave a series of lectures, demonstrations of the mannikin, and taught nurses personally, and after they had attended six cases satisfactorily to him they were to receive certificates of their competence.

English nursing began in 1840 by the establishment of a private school for nursing by Mrs. Frey, of Billingsgate, London. Mrs. Frey conducted this private school. She died in 1845. In 1856 an institution called St. John's Home in London established a training-school for nurses. The Florence Nightingale school for nursing was not established until 1860.

The character of the pupils and their qualifications to become competent nurses in these early English schools are not up to the standard which we set today. They were largely made of charwomen who had become unable to do their original heavy work. They were, to a large extent, addicted to the use of liquor, and their mental training was not up to our present standard.

From these beginnings, made approximately 100 years ago, has developed our modern training-school, so that every city, every town which deserves the title of modern, has its hospital with its school for the training of competent nurses. Standards of preliminary education have been raised, and the teaching put on a real educational basis. Education of the nurses has been carried to a point where we now have nurses specializing in different branches of their field of labor. We have those who are training for surgical work, those who are training especially for the operating-room in the hospital, and those who are training for maternity cases. All these changes in our teaching did not come at one time. It has been a gradual process of evolution. One training-school tried this method, another training-school tried another; they compared notes; and, finally, we have developed in the last seventy-five years a fairly systematic scheme for the education of nurses. The number of nurses has increased so that every community today has its competent, well-trained nurse; and people have learned to appreciate the nurse. She is no longer considered

a servant, but she comes into the family as a trained helper to be of service to them in their time of trouble.

The life of an individual is simply the result of evolution. From a very small beginning we develop into full-grown, normal individuals. Each individual character is modified by its environment and by certain events which occur in the life of every individual, which are beyond their control. We, however, all tend to a development which makes of us either useful citizens or drones.

The finishing of school is really the beginning of life. From this point of time one is guided by his own judgment rather than by mere circumstance. It is not my intention to offer you young women tonight advice as to what you shall

do or what you shall not do. There is one rule of life which, if followed, will lead you to success. This rule was written 4,000 years ago by Confucius. It is, "Do not do unto others what you would not have them do unto you."

In conclusion, allow me to congratulate you, not on the fact that you have finished the course of this training-school,—that came in the natural course of events after you had entered the school,—but, rather, let me congratulate you because you find in yourselves those feminine virtues which lead you to choose nursing as a vocation, and that, having chosen this vocation, should you later change your plans and adopt the usual vocation of woman, that of housewife, those things you have learned in the years you have spent in the hospital will be of the greatest value to you.

MISCELLANY

A MODEL FELLOWSHIP PLEDGE

The Sioux Valley Eye and Ear Academy seeks to maintain the highest standards of professional efficiency and ethical conduct among its members. Hence, I pledge myself as a condition of fellowship therein, to live in strict accordance with all its principles, declarations and regulations.

I pledge myself to place the welfare of my patients above all else, to strive by the study of professional literature, instruction of eminent teachers, interchange of opinion among associates and attendance upon important societies and clinics to constantly advance in knowledge; to seek the counsel of my colleagues when in doubt of my own judgment, to render them willing help, to safeguard their professional interests and to give freely of my services to the needy.

I pledge myself, so far as I am able, to avoid unwarranted publicity, dishonest money seeking and commercialism as disgraceful to our profession; that I will refuse absolutely all secret arrangements for money or other valuable consideration with consultants or others referring patients to me; nor will I divide fees in spirit or in fact.

I pledge myself to teach the patient his financial duty to the physician; to urge the physician to obtain his reward from the patient openly; to make my fees com-

mensurate with the services rendered and the patient's rights; and to avoid discrediting my associates by taking unwarranted compensation.

I will place this signed declaration in a conspicuous place in my office so that patients and profession alike may know the principles for which I stand.

Dated..... Signed.....

WHO TAKES COLDS?

A good deal has been said about hardening people so that they will not contract colds. There is an element of danger in this, since to expose a weak person to the rigors of cold baths and cold drafts is apt to lower resistance, thus favoring the very condition which it is desired to avoid. At the same time it should not be forgotten that the Arctic explorer does not ordinarily have colds so long as he stays out in the open, and that it is not the engineer and fireman in the cold, drafty cab who have colds, but those who ride in the close, dusty, overheated coaches behind. When all is said, it must be admitted that dusty, unventilated rooms perhaps play the greatest role in producing colds.—W. C. Rucker, U. S. Assistant Surgeon General.

THE JOURNAL-LANCET

Represents the Medical Profession of

Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the

North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.

H. J. ROWE, M. D. - - - Casselton, N. D.

H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

APRIL 15, 1918

MINNEAPOLIS CLINIC WEEK

The week in Minneapolis has exceeded the expectations of the various committees in regard to the number of visiting guests. About 300 sent return post-cards signifying their expectation of being present, and the registration on Wednesday afternoon as we close our forms was 325. So far as the committees are able to determine, the Clinic has been an unqualified success, and warrants us in expecting a renewal of the week next year; and, with the many things that have developed, we shall improve upon our methods and our organization.

The superintendents of hospitals have all been very generous in their endeavors to meet the visitors, and have given their hospitals over to the clinicians who have developed this phenomenal week. Most of the hospitals have insufficient space for visitors in operating-rooms, but, on the whole, this is probably a good feature, in that it prevents overcrowding in any room. In the large City and the University Hospitals the internal medicine men have plenty of space, and the clinics have been well attended.

The Clinic has developed, what has been known to exist in Minneapolis for some time, a spirit of loyalty and of friendliness in the medical profession. One of our visitors said that such an important week could not have been managed elsewhere in the Northwest because of a lack of the get-together spirit that exists in Minneapolis. One object that the Clinic has

accomplished, aside from the fact that it attracted the attention of the medical profession in the Northwest, is that it has educated the people of Minneapolis to understand that clinical facilities, hospitals, and clinicians here are equipped for the care and treatment of patients. The *Daily News* has commented upon this point editorially, and has suggested that the iron-clad ethical rules which have surrounded and darkened the history of medicine and made it an almost mystic affair, have been shattered by this endeavor, and that the people of the city and country are entitled to know some of the things that medical men usually keep to themselves or keep within the bounds of their medical organizations; and to that end the committee feels that it has accomplished a big purpose.

The Clinic Week owes very much to the newspapers for its success. They have been extremely courteous in giving us space and in making the Clinic an impersonal affair. No one man has been featured. No one has attempted to break into the limelight as an individual, but every one has preserved his place in the Clinic as a factor in the whole unit. This leaves us in a dignified position without fracturing any of the rules of practice or ethics, and we feel sure that next year will bring even a larger attendance, and that we shall be able to do our work better than we did it this year in our first attempt.

A registration of 325 visiting physicians from seven states at the end of the third day is a matter to be proud of in the profession.

It is the intention of the executive committee to publish in THE JOURNAL-LANCET of May 1 a report of the work done in every clinic of the week; but, in order to do so, every physician who gave a clinic must prepare an outline of it at once.

The subject of such report is, first, to show medical men not present exactly what was done during The Clinic; and, secondly, to show the character of the work the Minneapolis men are doing almost daily.

The report of a clinic should not exceed sixty or seventy words, and should not reach this number unless necessary to give a clear idea of the case. The essential thing is to show the reader just what was done in the different clinics, and what visiting physicians may expect to see almost any day they visit the city.

RECONSTRUCTION CAMPS

This form of reconstruction refers to the men who have been crippled and disabled in service abroad and who will be returned to this country

for treatment by specialists, including educators, orthopedists, and neurologists. The government of the United States has made an early beginning, in order to anticipate as rapidly as possible the care of the disabled men. This refers particularly to Fort McHenry, Fort Dodge, and Fort Riley, and doubtless to other camps nearer the Atlantic ports.

It has been found abroad,—in Germany, France, and England,—that this branch of the service must be very highly organized; therefore it requires high-class men who are able to conserve the invalided soldier. In many instances this means head operations, suturing of nerves, and the overcoming of contractures—the first two by surgical measures and the latter by mechanical and manual means. It has been found, too, that many wounds that are followed by contracted tendons and muscles can be very successfully treated, and many men may be restored to a reasonably active life with comparatively little deformity or disability.

The use of artificial limbs has been brought to a very high point of efficiency, and many men walk the streets who have worn artificial limbs for years with scarcely a trace of deformity or uncertainty of gait. Some of these men have applied to the medical advisory boards for special service, and occasionally a man expresses his desire to go into the aviation corps. There is no reason perhaps why some of these men cannot do good service in this department, but there is hesitancy still about accepting them until the investigation is carried out more fully. Restoration of paralyzed limbs, either by head operations or nerve-suturing, has received great attention abroad, and even in Canada, where they have special surgical hospitals for nerve-work. The end-results of these operations are still unproved. Many of them, of course, have been made within a comparatively short period, and there has not been sufficient time for the nerve trunk to regenerate.

Last year in England one hospital had already made 3,000 nerve-sutures. Some of them were comparatively prompt in their results, and others are still waiting for the restoration of the nerve, but with experience and practice, and particularly with an anatomical knowledge of what is best for the individual case, doubtless the results will be surprising. This means the mobilization of more medical men, and more specialists in the camps and hospitals of this country; and it would not be surprising if many of the medical organizations were retained in this country to carry on this kind of work. The pinch is already on as to

securing sufficient medical forces to conduct either experiments or operations in special lines. Unless these operations are done at the earliest possible moment such good results are not obtained as when they are done before the distal and proximal ends of the nerve have undergone decided changes.

The headquarters for this work are naturally in Washington, where the Surgeon-General of the United States Army has now a great building. The men thus engaged occupy five entire buildings and parts of other buildings exclusive of the Surgeon-General's Library, the Army Medical Museum, and the Army Medical School, with 165 officers and 545 clerks. This is the beginning of this great mobilization scheme. It is necessary to have also chemists, statisticians, bankers, efficiency engineers, sanitarians, electrical experts, architects, and engineers of other types to be assigned to duty in these various offices. The leading medical men of the United States are doing work which probably is far in excess of the work they would do at home; that is, the time is more fully occupied, and it is necessary to divide them into various divisions, and at the head of each division is an expert. On April 1, 1917, there were 700 medical officers and 10,000 enlisted men in the medical department of the United States Army. There are now more than 17,000 medical officers in active service, and about 150,000 enlisted men in the medical department. One can hardly realize the scope of this undertaking, but it will be realized when the care and attention that the soldier abroad receives and the reconstruction work which he will receive in this country are known.

THE ADMINISTRATION OF DRUGS BY OSTEOPATHS

There has always been a question in the minds of medical men as to the administration of drugs by osteopaths, and it has been pretty generally known that many osteopaths give medicinal remedies of some kind and that they have used therapeutic agents, as well as osteopathy. Electricity is one of the principal things that some of the osteopaths rely upon in conjunction with their osteopathic treatment.

The attention of the editor has been called to the fact that osteopaths may use morphine; and instances have been brought to the attention of the State authorities where the local osteopaths were buying morphine tablets with the understanding that the Harrison antinarcotic law grants them permission to do so.

A ruling has been made through the Attorney-

General's office by Montreville J. Brown, Assistant Attorney-General, in which he says to the inquirer: "You are advised that such an osteopath cannot prescribe morphine or administer the same hypodermically or otherwise under the laws of our state. Chapter 260, Laws of 1915, designates who may prescribe or administer morphine in this state, and an osteopath is not among those so designated. The fact that an osteopath may have a permit from the federal government to administer narcotics, does not give such osteopath the right to administer the same in this state in violation of the statutory law thereof.

This seems to settle the question of prescribing morphine, and the inability of an osteopath to use it under any circumstances. This opens up a rather interesting question as to how much of this practice has been carried on by osteopaths or chiropractors. The average chiropractor is not sufficiently familiar with hypodermic medication to use morphine, or any other drug, under the skin. The osteopath, we presume, will claim more knowledge in the line of technic than is possessed by the chiropractor, and thus so feel qualified to use the drug. A recent indictment against five physicians in Minneapolis who sell drugs to narcotic addicts brings the medical profession into criticism; and the statement has been made by the Public Safety Commission that either users of morphine or drafted men have been given narcotics by physicians in order to disqualify them when they reach their various camps. This matter has already been taken up by the grand jury, and will probably become a court issue, and then we shall know more definitely about the matter.

There must be a large number of addicts in Minnesota, and in the country in general, and many of them are unwilling to submit themselves to the breaking up of the habit; therefore they use every means possible to get their favorite remedy, and it has been found that physicians in good standing have been either openly or surreptitiously giving patients drugs of this order, instead of helping the individual to overcome a dangerous habit. The average narcotic addict is very clever and very cunning in the selection of his physician or in securing the drug, and it is quite evident that there are many retailers or jobbers who supply them with any sort of narcotic. It is still an open question, where they get it and how they get it, but it is probably peddled from other countries by tried agents who act as distributors to the medical profession. This state of affairs will probably continue as long as

it is possible to engage in drug traffic, but it is quite apparent that a drastic remedy applied to willful violators of the Harrison law will be put in force at an early date. Druggists, as a rule, are very careful about the amount of narcotic they supply even to physicians, and they require a federal prescription after a license has been issued to the physician. Even that, too, may be abused in some instances; however, where the habit has been long continued it is a cruelty to deprive the user of the drug, particularly old people who have become dependent upon it, have used it for years, and perhaps it is the only source of comfort they enjoy. What to do with these people is a problem. Some of the users become enthusiastic about giving up the habit, and actually succeed for a period of time; but the least stress, strain, or struggle wipes out their good resolutions, and they go back to the drug again. The only remedy is to place the responsibility where it belongs, that is, upon the attending physician, who is more or less carried away by his sympathies or mercenary motives. In the latter case an effort should be made to correct this evil practice.

CAUTION ABOUT THE PUBLICATION OF SCIENTIFIC PAPERS BY MEDICAL OFFICERS

The Surgeon-General of the Medical Corps, N. A., requests us to announce that medical officers are not permitted, without proper authorization, to publish in medical journals professional papers requiring reference to official records or to experience gained in the discharge of their duties without the previous authority of the Surgeon-General. This permission can be obtained only by submitting two copies of any such paper to the Surgeon-General, who, if a paper is approved for publication, will forward one to the journal designated by the writer.

A few professional papers have been published without permission, and no doubt without a thought on the part of editors that it was contrary to the wise rule of the War Department. THE JOURNAL-LANCET has refused to publish some very interesting material sent it, feeling that the writers were subjecting themselves, wholly unwittingly, to criticism from the War Department.

This ruling should not discourage the writing of papers that contain useful information for physicians at home, and, of course, useful to the public; but the rule should be strictly observed, which is made for the greater good of the public.

BOOK NOTICES

TRAUMATIC SURGERY. By John J. Moorhead, B.S., M.D., F.A.C.S., Adjunct Professor of Surgery New York Post-Graduate Medical School and Hospital; Visiting Surgeon Harlem Hospital, etc. With 522 original illustrations. Philadelphia: W. B. Saunders Company. 1917. Cloth, \$6.50; half morocco, \$8.

This treatise on "Traumatic Surgery" is a remodeling of a former edition. Like so many books that come to our desk at the present time, it contains a great deal of material which one may find in almost any text-book on surgery.

A large portion of the volume is devoted to fractures; still the subject is not covered so comprehensively as it is in works devoted exclusively to this class of injuries.

War surgery has developed some new methods in the last few years, but the author has made little use of the lessons taught by the present war.

The work is hardly comprehensive enough for the medical student, and it is too incomplete for the specialist. Its proper field is perhaps in the library of the physician who does not come in either of these classes, and who does not possess the many excellent works upon the subject discussed in Dr. Moorhead's book.

As a ready reference work the average general practitioner will find this book a very handy one.

—FARR.

THE THIRD GREAT PLAGUE: A DISCUSSION OF SYPHILIS FOR EVERYDAY PEOPLE. By John H. Stokes, A.B., M.D., Chief of the Section of Dermatology and Syphilology, The Mayo Clinic, Rochester, Minnesota. 12 mo. of 204 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1917. Cloth, \$1.50 net.

Dr. Stokes, in his "Third Great Plague," has very ably given to the lay public the present-day knowledge of syphilis in such language that it can be understood by all. The book is of especial value to social-service workers and those who may be called upon to make explanations and render advice in a semiprofessional way.

—MICHELSON.

REPORTS OF SOCIETIES

THE MINNESOTA ACADEMY OF MEDICINE

The March meeting of the Academy was held on March 13, the president, Dr. Cross, in the chair. Twenty-six members and two visitors were in attendance. In the absence of the secretary, Dr. J. E. Hynes acted as secretary pro tem.

Dr. Wilcox exhibited various types of splints, with photographs of the splints in use. Dr. Wright reported a case of rupture of the testicle. Dr. Farr recently operated for cleft palate under local anesthesia, reporting the same to the Academy. Dr. Abbott, in a case of tuberculous peritonitis with unusual clinical symptoms, found the focus of infection to be in the Fallopian tube; and Dr. Hare reported a similar condition of

tuberculosis where the focus of infection was in the appendix. The Fallopian tubes were also involved. Dr. Mann spoke of a patient who suffered a fracture of the third lumbar vertebra, the patient later developing an osteomyelitis that necessitated the amputation of both legs. Still later there developed an osteoporosis of the head of the femur. A bone-graft from one of the patient's ribs was followed with apparently good results. Dr. Moore mentioned a case of elephantiasis involving the left hand only. Dr. Dunsmoor gave the history of a patient who had a pathological fracture of the humerus, caused from a round-cell sarcoma. The fact that the fracture was not accompanied by any palpable change in the bone, gave to the case a very unusual clinical aspect.

Dr. Frank Wright read a paper entitled, "Shall Operation for Hypertrophied Prostate be done in Two Stages?" which was fully discussed by Drs. Schwyzer, Earl, Colvin, Wilcox, and Farr.

REPORTS OF CASES

The following case was reported by Dr. Hammes: A man, aged 54, was found unconscious in the back of a saloon, apparently having fallen down stairs. He was taken to the hospital with a suspected fracture of the skull. An x-ray examination proved negative. There was, however, a most marked bilateral spasticity of all four extremities with a bilateral patellar clonus, ankle-clonus; also a double Babinski. A lumbar puncture was made and about 30 c.c. of pure blood withdrawn. A Wassermann made from this blood was positive. For four days the patient remained moribund, and then gradually improved. Another lumbar puncture was made, the spinal fluid being of a yellowish color and of normal pressure. At the end of the second week, the patient was conscious, the spasticity had disappeared entirely, there was normal control of the extremities, and the reflexes were normal, except for a slight Babinski on the left side. At the end of the fourth week another lumbar puncture was performed at nine in the morning, and 5 c.c. of normally colored spinal fluid withdrawn. At seven o'clock in the evening of the same day the patient became suddenly cyanotic, dyspneic, and unconscious, and died. A post-mortem examination was made on the skull only. It showed a fracture of the right parietal bone, extending upward with a marked intradural hemorrhage from the left Rolandic region, and some softening. There was a marked evidence of a contrecoup, in that there was softening in the right temporal region of the brain. This, together with the marked clinical improvement, in spite of the pathological feature, was the interesting feature of the case. The immediate cause of death, apparently, was a pulmonary embolus.

A specimen of a stomach removed January, 1918, was presented to the Academy by Dr. H. B. Sweetser.

History of patient: male, aged 52. About a year ago he began to have discomfort in the epigastrium, especially after a heavy meal; yet he enjoyed eating, his appetite was good, and he did not vomit. There was a slight loss of weight at this time, which was restored upon forced feeding. The x-ray gave a typical picture of carcinoma of the stomach. Because of the very meager clinical symptoms, a great deal of surprise was experienced at the time of operation at the extent of the lesion, which extended from the pylorus along the lesser curvature for a distance of three and one-half

inches. It involved both the anterior and posterior walls of the stomach, leaving at the pylorus less than an inch of normal wall adjacent to the greater curvature. There was no visible glandular involvement, and no metastasis to the liver. So much of the stomach was of necessity removed that it was impossible to do a gastro-enterostomy. The technic of Polya was employed. Recovery from the operation was smooth and satisfactory. The patient now is eating a full diet and is up and about the hospital.

Dr. Arthur T. Mann reported a congenital deformity of the genitals in a girl of nineteen. The uterus was absent; there had been no menstruation nor any symptoms of a menstrual period. The hymen and vagina were normal up to the vault of the vagina, which, here, spread from side to side in a broad smooth arch like an umbrella. At the extreme corners, on either side, was a small, red, funnel-shaped opening, where the remnants of the ducts of Müller entered. These ducts had failed to fuse and produce an uterus, and there was nothing left on either side to suggest the separate parts of a double uterus. It was as though the ducts of Müller might have formed tubes corresponding to the Fallopian tubes, which opened directly into the vagina at the angles. The fact that there had been none of the symptoms which go with menstruation, suggests that the ovaries are rudimentary also.

The case must be exceedingly rare. More common are these cases where the ducts fuse, the form of the uterus varying with the amount of fusion. The bicornate and unicornate uterus, the uterus with a septum, and the double uterus are examples of this type. When the Müllerian ducts fuse below the uterus, the septum failing to absorb, we have the double vagina and the double hymen; when the lower end fails to open, we have the imperforate hymen.

Dr. Mann also reported a case of double uterus with a double vagina in which the woman had given birth to a full-term child from the left uterus with laceration of the cervix on that side and a complete rupture of the vaginal septum. She presented herself some years ago for a repair of the lacerated cervix. He had seen two cases of bicornate uterus, in one of which a doctor in one of the smaller towns had performed a supravaginal hysterectomy for some unknown cause. He also reported a case of imperforate hymen in a girl of seventeen, who had all the symptoms of menstruation for four years with increasing pain and distress, but without the flow, and in whom all the remains of the menstrual flows were imprisoned behind a tough, bulging hymen in a dilated uterus and vagina.

FRED. ELMER LEAVITT, M. D.,
Secretary.

NEWS ITEMS

Dr. S. O. Lund has moved from Madison to Montevideo.

Dr. E. B. Johnson, of Benson, has moved to Montevideo.

Dr. I. M. Law has moved from Werner, N. D., to Hannah, N. D.

Dr. E. S. O'Hare has moved from Wing, N. D., to Milroy, Minn.

A tri-county tuberculosis hospital is to be established near Ashland, Wis.

Dr. H. E. McLaughlin, Waupaca, Wis., has moved to Lafayette (Minn.).

A hospital for patients with contagious diseases is to be erected in Winona.

Dr. George H. Gulbrandsen has moved from Canton, S. D., to Brookings, S. D.

Grand Forks, N. D., has opened its new plant for filtering and softening its city water.

Dr. C. R. Stanley, of Sauk Rapids, will go to Ely to work on the staff of the Shipman Hospital.

Lieut. J. E. Dunn, of Groton, S. D., at Camp Lewis, Wash., has been promoted to a captaincy.

Dr. H. F. Lambert, of Chicago, has joined the staff of the Lenont Hospital of Virginia (Minn.).

The South Dakota State Medical Association will hold its annual meeting at Mitchell on May 21-23.

Of the 5,539 women physicians in the United States, 1,796, or 33 per cent, have registered for war service.

Dr. R. A. Schnacke, late police surgeon of St. Paul, is now associated with Drs. Lee and Westby, of Madison.

The annual meeting of the North Dakota State Medical Association will be held at Fargo on June 19 and 20.

Dr. E. C. Stucke has moved from Garrison, N. D., to Bismarck, N. D., to enter partnership with Dr. Rawlins.

Dr. B. C. Murdy, of Aberdeen, S. D., has passed the crisis in an attack of pneumonia, and is rapidly improving.

Dr. A. H. Doty, of St. Paul, was found guilty of performing an illegal operation, and was sentenced to Stillwater.

Billings, Montana, has plans ready for another new hospital, St. Vincent's, work upon which will be begun very soon.

Dr. D. Edmund Smith, of Minneapolis, has gone to France to do medical work under the auspices of the Red Cross.

Dr. A. F. Kilbourne, superintendent of the Rochester State Hospital, who has been seriously ill, is reported to be improving.

Dr. A. A. Conley, of Cannon Falls, has gone to New York City to do postgraduate work in the Postgraduate Medical School of New York.

St. Paul has been unable to find a physician to accept the position of police surgeon, made vacant by the resignation of Dr. Edward Schons.

The citizens of Appleton are planning to build a municipal hospital at a cost of \$15,000. A large part of the necessary amount has been subscribed.

The report that Dr. C. M. Hollister, of Pierre, S. D., will locate in Yankton for practice, is erroneous. Dr. Hollister is not in good health, and will take a long rest.

A Health Nurses' Section of the North Dakota State Nurses' Association was organized last month, with Miss Agnes Kloman, school nurse of Fargo, as its chairman.

The Supreme Court of Minnesota has decided that a physician has no right to perform an autopsy on the body of a patient without the consent of the patient's nearest kin.

Major J. P. Aylen, of Fargo, N. D., has been made chief of the surgical section of a base hospital unit soon to be established in France. Major Aylen is now at Camp Wadsworth, S. C.

Dr. F. U. Davis, of Faribault, has been appointed captain of the Seventh Battalion of Home Guards in recognition of his faithful work on the Rice County Board of Medical Examiners.

Dr. Asa F. Goodrich, of St. Paul, died on March 29 at the age of 53. Dr. Goodrich was a leading homeopathic physician in Minnesota, and had practiced in St. Paul nearly thirty years.

The Minnesota examination of graduate nurses will be held in St. Paul on April 26 and 27. Applicants for state registration should apply to Lydia H. Keller, 803 Lowry Building, St. Paul.

Dr. Harold L. Lamb, of Sauk Center, now surgeon of the 326th Field Artillery, located at Camp Zachary Taylor, Ky., has been promoted from the rank of captain to that of major, M. R. C.

In a survey of the Zumbrota schools each of the 207 pupils, out of 304 examined, showed one or more defects. This percentage is about the same as in the Grand Rapids schools, noticed below.

The Pennant, the monthly bulletin of the North Dakota Anti-Tuberculosis Association, says there are 5,000 open cases of tuberculosis in that state, and that more than 1,000 in the state die of the disease annually.

The University of Minnesota Base Hospital Unit No. 26, now at Fort McPherson, Ga., has been ordered to start for France. All nurses of the Unit now at home have been ordered to join the Unit.

Dr. H. D. Valin, formerly of Mankato, has moved from Ft. Wayne, Ind., to Ottawa, Ill., and become associated with the Illinois Valley Lab-

oratory, with which Dr. Roswell Pettit is also associated.

The student nurse at the Minneapolis City Hospital, whose discipline came near disrupting the staff of the hospital, will be given a diploma when her class graduates, but will not be reinstated in her work at the hospital.

Dr. Victor Armstrong, of Sioux Falls, S. D., a former student in the University of Minnesota and a medical graduate of the University of Illinois, has gone to France for duty. He is a specialist in eye, ear, nose, and throat work.

Dr. W. G. Eisenman, the new health officer of Chisholm, accepted office with the announcement that he will make Chisholm a clean place, and will abolish the tin can, which, with water in it, becomes the breeding-place for flies and mosquitoes.

Dr. W. F. Cogswell, secretary of the State Board of Health of Montana, is redistricting the state with a view to enforcing regulations that will put the state in the registration group of states. The registration of births will be strictly enforced.

Five Minneapolis physicians have been arrested for selling narcotics to habitual users of such drugs. They were released under bail of \$2,000 to \$3,000 each. Indictments will probably be found against other physicians on the same charges.

Drs. Mork and Watson, of Worthington, have purchased the building in that city formerly used as a hospital, and will use it for hospital purposes. This plan leaves Dr. Wiedow, formerly associated with Dr. Mork, sole proprietor of the City Hospital.

The malpractice suit against Drs. Farrish and Portman, of Fairmont, has been decided in favor of the physicians after a seven-day trial. Seven lawyers were engaged in the case. Such cases are almost uniformly a disgrace to the lawyers bringing them.

The U. S. Public Health Service, Washington, D. C., requests physicians to notify the Hygienic Laboratory of the Service of any untoward results following the use of arsphenamine and neoarsphenamine, together with samples of the drug showing such results.

At the meeting of the Goodhue County Medical Society, held last month, Dr. H. W. Meyerding, of Rochester, read a paper on "Bone Cysts," with x-ray plate demonstrations; and Dr. C. R. Ball, of St. Paul, read a paper on "Nervous Syphilis and Serobiological Reactions."

A striking—and a pleasing—illustration of the increasing work done by the North Dakota State Public Health Laboratory in a single line is shown by the increase in examinations of specimens made. The number made in 1916 was 7,600, while in last six months the number made was 13,116.

In the survey, by a public health nurse, of the school children of Grand Rapids, Minn., 157 of the 203 children examined, were found defective. Only ten children had had their teeth examined and treated prior to the examination, which shows a shameful condition of health-preservation.

As the taking of x-ray photographs in all fracture cases would prevent most of the malpractice suits, we shall be glad to record in these columns the installation of such apparatus, especially in small villages. Dr. N. C. Wolverton, of Linton, N. D., a town of only 700 inhabitants, has just put in a complete x-ray outfit.

Dr. J. M. Rains, health officer of Willmar, has given notice that ice in the course of delivery in that city must be protected from dust, which, according to Mr. H. A. Whittaker, Director of the Sanitary Division of the Minnesota State Board of Health, is more dangerous than all the impurities found in the stream or lake from which ice is harvested.

The following are the newly elected officers of the Women's Auxiliary of the Hennepin County Medical Society: President, Mrs. George E. Benson; first vice-president, Mrs. O. W. Yoerg; second vice-president, Mrs. E. K. Green; recording secretary, Mrs. F. W. Schlutz; corresponding secretary, Mrs. C. P. King; treasurer, Mrs. Martin Aune; auditor, Mrs. W. J. Byrnes.

RECENT NEW ASSIGNMENTS OF NORTH-WESTERN MEDICAL OFFICERS

Minnesota—

To Fort Riley, Kas.: Capt. J. S. Macnie, Minneapolis; Lt. A. E. Williams, Backus; Lt. T. H. Dedolph, Braham; Lt. W. J. Eklund, Duluth; Lt. H. N. Sarchet, Redwood Falls; Lt. H. E. Douglas, Hutchinson; Lt. G. T. Nording, Minneapolis.

To the Army Medical School, Washington, D. C.: Lt. J. Warren Bell, Minneapolis; Lt. N. T. Johnson, Minneapolis; Lt. R. E. Olson, Minneapolis; Lt. A. E. Mark, St. Paul; Lt. C. F. Snell, Twin Valley.

To Camp Dodge, Iowa: Lt. W. P. McKillup, Duluth. To Camp Grant, Ill.: Lt. T. L. Hansen, Albert Lea; Lt. I. G. Wiltrout, Little Falls; Lt. R. E. Spinks, Middle River; Lt. J. J. O'Hearn, Rochester; Lt. W. R. Winnie, Rochester; Lt. W. A. Meierding, Springfield; Lt. J. R. Waller, Wilmot.

To New York City:

North Dakota—

To Chicago, Ill.: Capt. J. E. Countryman, Grafton. To Fort Riley: Lt. M. D. Westby, Cooperstown; Capt. G. S. Jones, Williston; Lt. L. B. Derdiger, Esmond; Lt. Arthur Peake, Grand Forks; Lt. J. W. Newlove, Minot; Lt. F. E. Weed, Park River. Lt. G. L. Rudell, Plaza; Lt. L. H. Van Slyke, Tioga; Lt. E. E. Green, Westhope.

To Fort Sam Houston, Texas: Lt. T. L. DePuy, Jamestown.

South Dakota—

To Fort Riley, Kas.: Capt. W. E. Fehliman, Lead; Lt. D. W. Sullivan, Britton; Lt. W. R. Ball, Whitehall; Lt. C. F. Brooks, Platte; Lt. P. R. Pinard, Wagner.

To Rochester, Minn.: Lt. R. A. Crawford, Chamberlain.

Montana—

To Camp Dodge, Iowa: Lt. M. T. Vornhalt, Glasgow.

To Camp Grant, Ill.: Lt. W. E. Long, Anaconda.

To Chickamauga Park, Ga.: Lt. A. A. Pastene, Chester.

To Army Medical School, Washington, D. C.: Lt. L. S. Cassell, Sweet Grass.

To Fort Riley, Kas.: Capt. G. H. Putney, Great Falls; Lt. E. F. Dixon, Bynum; Capt. E. K. Vidal, Great Falls; Capt. J. N. Alexander, Roundup; Lt. A. S. Needles, East Scebey; Lt. G. A. Baker, Ekalaka; Lt. E. A. Gans, Judith Gap; Lt. P. L. Greene, Livingston; Lt. J. R. Soltero, Moore.

Transfers

Major J. F. Corbett, Minneapolis, from Winnipeg, to Ann Arbor, Mich.

Lt. A. F. Selleseth, Minneapolis, from Fort Oglethorpe, Ga., to Camp Crane, Pa.

Lt. Carl Paulson, Minneapolis, from Camp MacArthur, Texas, to Chicago.

Capt. J. A. McLaughlin, Minneapolis, from Chicago to Fort Oglethorpe, Ga.

Lt. P. S. Epperson, Biwabik, Minn., from Fort Riley, Kas., to New York City.

Lt. C. D. Richmond, Jeffers, Minn., from Fort Riley, Kas., to Camp Cody, N. M.

Lt. T. F. McCormick, Minneapolis, from Fort Riley, Kas., to Camp Taliaferro, Texas.

Lt. T. G. Clement, Vernon Center, Minn., from Camp Pike, Ark., to Fort Oglethorpe, Ga.

Major J. A. Mattson, Hot Springs, S. D., from Camp Grant, Ill., to Rochester, Minn.

Lt. J. C. Rogers, White Lake, S. D., from Fort Riley, Kas., to Rockefeller Institute, N. Y.

Lt. H. B. Wentz, Verona, N. D., from Fort Oglethorpe, Ga., to Camp Meade, Md.

Capt. B. S. Nickerson, Mandan, S. D., from Fort Riley, Kas., to Jefferson Barracks, Mo.

Lt. W. F. Maertz, Lidgerwood, N. D., from Fort Riley, Kas., to Camp Grant, Ill.

Lt. C. C. Smith, Stanton, N. D., from Fort Riley, Kas., to Camp Taliaferro, Texas.

Capt. J. C. Countryman, Grafton, N. D., from Camp Zachary Taylor, Ky., to Chicago.

Lt. Axel Oftedal, Fargo, N. D., from Fort Riley, Kas., to Fort Sam Houston, Texas.

Lt. O. B. Simon, Tioga, N. D., from Fort Oglethorpe, Ga., to Newport News, Va.

Lt. Hugo Mella, Bismarek, N. D., from Fort Riley, Kas., to Pittsburg, Pa.

Lt. W. G. Dye, Great Falls, Mont., from Fort Riley, Kas., to New York City.

Lt. T. M. Morrow, Medicine Lake, Mont., from Fort Riley, Kas., to Philadelphia, Pa.

Lt. A. M. McCauley, Great Falls, Mont., from Chicago to Camp Grant, Ill.

Lt. J. E. Bridenbaugh, Billings, Mont., from Fort Riley, Kas., to New York City.

OFFICE FOR RENT IN MINNEAPOLIS

Three hundred and sixty square feet of floor space in one of the best down-town office buildings, suitable for physician or dentist. Remarkably low rent. Address 118, care of this office.

OFFICE GIRL WANTED BY A MINNEAPOLIS SPECIALIST

An experienced office girl of good address with a fair knowledge of stenography is wanted. An excellent opening for the right girl. Might consider one without experience. Address 120, care of this office.

PHYSICIAN WANTED

Physician wanted for a general country practice which will run \$5,000 per year collectible. Must be an American and alive. Good town in northern North Dakota. Best kind of support will be given a good man. Nothing to buy. Good schools. Address 123, care of this office.

PHYSICIAN'S HOUSE FOR SALE IN MINNEAPOLIS

If you want to come to the city and locate at once in a house that will be worth one thousand dollars a year to you because of its location, see my house. Modern in every way, and a bargain. Address 126, care of this office.

OPENING FOR PHYSICIAN

An A No. 1 opening for a good physician in a small North Dakota town. A man who can do some surgery preferred. Plenty of work to do. No practice nor property to be purchased to get in. If interested write at once before the place is taken. Address 124, care of this office.

PHYSICIAN WANTED

A competent physician is wanted in a good farming community in northwestern Minnesota. Scandinavian preferred. The village has always had a good doctor; those who have located here soon accumulated a few thousand dollars, and then left for a larger city. Address 121, care of this office.

PHYSICIAN WANTED

A young physician can find a fine opportunity by investigating this proposition: a town of 2,200 and only one doctor; prosperous community; good collections; excellent territory to draw from. A physician can step into a lucrative practice that has no strings attached to it. Write, wire, or come and investigate at once. Address 119, care of this office.

A MEDICAL ASSISTANT

A large medical and surgical firm in one of the best cities (15,000 inhabitants) of the Northwest wants a man of special training and experience to take over medical part of the work. A good salary and an interest in the business will be given to the right man. Address 127, care of this office, and give a full account of yourself.

POSITION WANTED

I desire a location as assistant or as associate to a physician in a town of 5,000 or over in the Northwest. I am married and have two children, and am a graduate of the N. Y. U. Medical College, '10. Have had two years' internship, 3 years private practice and 3 assistantship. Address 117, care of this office.

POSITION AS OFFICE ASSISTANT WANTED

By a young woman who has been assistant for over five years to a surgeon now called to army service. She can do all the work required of an assistant in minor operations, keep books, do correspondence, operate an x-ray machine and develop plates, etc. Address 115, care of this office.

PARTNERSHIP WANTED

Physician of ten years' successful practice desires association with physician or surgeon in city of 4,000 or more where there is opportunity for permanent practice; American, Protestant, aged 36; Minnesota license; reciprocity; just completing twelve-month postgraduate course surgery and urology; proposition must be strictly ethical and bear investigation; references exchanged. Address 116, care of this office.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-first annual session, opened Sept. 24, 1917, and closes June 8, 1918. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters this session. For further information address Charles Chassaignac, M. D., Dean, New Orleans Polyclinic, post office drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

LOCATION WANTED IN ONE OF THE TWIN CITIES

I desire a locum tenency, assistantship, association with good combination, or will purchase partnership in either of the Twin Cities. I am an American, married, aged 40, graduated 1898, 20 years' experience, extensive study in Europe, speak three languages, always had large practice and doing referred surgical work at present, high-grade work in surgery and medicine. Best of references and wide acquaintance in Twin Cities. Will make personal visit at once to look proposition over, and acquaint you with my personality and ability. Licensed in Minnesota and several other states. Honorably discharged from military service. Address 128, care of this office.

DEATHS REPORTED TO THE STATE BOARD OF HEALTH OF
MINNESOTA FOR THE MONTH OF JANUARY 1918

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Ada	1,253	1,432	3			1										1		
Albert Lea	4,500	6,192	4															
Alexandria	3,681	3,001	4		1											2		
Anoka	3,769	3,972	5		1													
Austin	5,474	6,960	6	1		1												
Barnesville	1,326	1,353	3															
Bemidji	2,183	5,099	7			2												
Benson	1,525	1,677	1													1		
Blue Earth	2,900	2,319	2															
Brainerd	7,524	8,526	12	2		2												1
Breckenridge	1,282	1,840	3											1		1		1
Canby	1,100	1,528	3						1									
Cannon Falls	1,239	1,385	1															
Chaska	2,165	2,050	0															
Chatfield	1,426	1,226	0															
Cloquet	3,074	7,031	7	1		1					1							1
Crookston	5,359	7,559	9	2														1
Dawson	962	1,318	2															1
Detroit	2,060	2,807	4															
Duluth	52,968	78,466	90	9	1	12	3	1			1	1			1	3		9
East Grand Forks	2,077	2,533	1	1														
Ely	3,572	3,572	7													1	1	3
Eveleth	2,752	7,036	12			3		1										
Fairmont	3,440	2,958	6	1				1								3		1
Faribault	7,868	9,001	8	1												1		1
Fergus Falls	6,072	6,887	5			1										1		
Glencoe	1,788	1,788	2															
Glenwood	1,116	2,161	0															
Granite Falls	1,454	1,454	2															
Hastings	3,811	3,983	6			1												
Hutchinson	2,495	2,368	2															
International Falls		1,487	3															1
Jordan	1,270	1,151	0															
Lake City	3,142	3,142	8			1												1
Le Sueur	1,937	1,755	1															
Little Falls	5,774	6,078	3			1												
Luverne	2,223	2,540	1															
Madison	1,336	1,811	2															
Mankato	10,559	10,365	20	2		3										1		1
Marshall	2,088	2,152	1														1	
Melrose	2,591	2,591	2			1										1		
Minneapolis	202,718	301,408	366	30	7	34	5	1			1		1		13	27		15
Montevideo	2,146	3,056	6			2										1		2
Montgomery	979	1,267	2															
Moorhead	3,730	4,840	0													1		
Morris	1,934	1,685	0															
New Prague	1,228	1,554	1															
New Ulm	5,403	5,648	9		1													
Northfield	3,210	3,215	3													2		
Ortonville	1,247	1,774	2															
Owatonna	5,561	5,658	10												2	1		1
Pipestone	2,536	2,475	5			1												
Red Lake Falls	1,666	3,666	0															
Red Wing	7,525	9,048	8		1											1		
Redwood Falls	1,661	1,666	4													2		
Renville	1,075	1,182	2															
Rochester	6,843	7,844	48	1	2	2										11		
Rushford	1,100	1,011	3													1		
St. Charles	1,304	1,159	2															
St. Cloud	8,663	10,600	17			1									1	2		1
St. James	2,102	2,102	1															
St. Paul	163,632	214,744	249	31	4	24	1	2								7	15	12
St. Peter	4,302	4,176	3													1		
Sauk Centre	2,154	2,154	4															
Shakopee	2,046	2,302	5			1												1
Sleepy Eye	2,046	2,247	2															1
South St. Paul	2,322	4,510	3			1												
Staples	1,504	2,558	4															
Stillwater	12,318	10,198	11	1												1		1
Thief River Falls	1,819	3,174	1															
Tower	1,111	1,111	0															
Tracy	1,911	1,826	2			1												
Two Harbors	3,278	4,990	4					1										
Virginia	2,962	10,473	22	1		9	1	1										1
Wabasha	2,622	2,622	5															
Warren	1,276	1,613	1	1														
Waseca	3,103	3,054	1															
Waterville	1,260	1,273	0															
West St. Paul	1,830	2,660	3			1										1		1
Willmar	3,409	4,135	3															
Winona	19,714	18,583	22	1		2										3		
Winthrop	813	1,043	0															
Worthington	2,386	2,385	4															

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	1															
Altkin	1,719	1,633	1															
Akeley			0															
Appleton	1,184	1,221	0															
Belle Plaine	1,121	1,204	1															1
Biwabik		1,690	1															1
Bovey		1,377																
Browns Valley	721	1,058	0															
Buffalo	1,040	1,227	4														1	
Caledonia	1,175	1,372	0															
Cass Lake	546	1,011	0															
Chisholm		7,684	5			1												1
Coleraine		1,613	2														1	
Delano	967	1,031	3															
Farmington	733	1,024	0															
Fosston	864	1,055	2															
Frazee	1,000	1,645	1															
Grand Rapids	1,428	2,239	1				1											
Hibbing	2,481	8,832	5	1		1									1			1
Jackson	1,756	1,907	3			1												
Janesville	1,254	1,173	2															
Kenyon	1,202	1,237	1												1			
Lake Crystal	1,215	1,038	0															
Litchfield	2,280	2,333	3															
Long Prairie	1,385	1,250	3															
Madelia	1,272	1,273	0															
Milaca	1,204	1,162	0															
Mountain Lake	959	1,081	1												1			
Nashwauk		2,080	0															
North Mankato	939	1,279	2															
North St. Paul	1,110	1,404	1															
Osakis	917	1,013	2															
Park Rapids	1,313	1,850	0															
Pelican Rapids	1,033	1,019	0															
Perham	1,182	1,376	3														1	
Pine City	993	1,258	0															
Plainview	1,038	1,175	2															
Preston	1,278	1,193	0															
Princeton	1,319	1,555	3															
St. Louis Park	1,325	1,743	2															
Sandstone	1,189	1,818	2															
Sauk Rapids	1,391	1,745	1								1							
South Stillwater	1,422	1,343	3			1											1	
Springfield	1,511	1,482	1															
Spring Valley	1,770	1,817	5		1										1			
Wadena	1,520	1,820	0															
Wells	2,017	1,755	1															
West Minneapolis	2,250	3,022	3			1												
Wheaton	1,132	1,300	1															
White Bear Lake	1,288	1,505	1			1												
Windom	1,944	1,749	2															
Winnebago City	1,816	2,555	2															1
Zumbrota	1,119	1,138	1															
STATE INSTITUTIONS																		
Anoka, Asylum			2	2														
Faribault, School for Blind			0															
Faribault, School for Deaf			0															
Faribault, School for Feeble Minded			3	1														
Fergus Falls, Hospital for Insane			12	4		1	1											
Hastings, Asylum			3	1														
Minneapolis, Soldiers' Home			5														1	1
Owatonna, School for Dependents			0															
Red Wing, State Training School			0															
Rochester, Hospital for Insane			9	1														
Sauk Centre, Home School for Girls			0															
St. Peter, Hospital for Insane			17	1														
St. Cloud, State Reformatory			0															
Stillwater, State Prison			0															
OTHER PARTS OF STATE			789	69	8	84	7	5	2		5	1	2	1	17	51		31
Total for state			2017	166	28	200	19	12	3		9	2	3	4	46	142	4	97

*No report received. REGISTRAR not doing his duty
132 stillbirths not included in above totals.

Why Oats

Hold Unique Place

They supply in food units 1810 calories per pound.

That's 90 per cent more than round steak—10 per cent more than wheat.

Served with milk they supply a perfectly balanced food, with all needed elements.

They are rich in minerals, particularly phosphorus and lecithin.

They supply the vitamins.

They usually include the bran.

They supply ideal food at a minimum cost. Quaker Oats cost 5 cents per 1000 calories.

Eggs cost 10 times as much.

Meats, on the average, 8 times as much.

Bread nearly twice as much.

Seven breakfasts of Quaker Oats can be served at the cost of one bacon-and-egg breakfast.

Quaker Oats

Queen Grains Only

Quaker Oats is flaked from just the big, plump oats. We get but ten pounds from a bushel. On that account it stands supreme in flavor, as all the world has recognized. Yet it costs no extra price.

The Quaker Oats Company

Chicago

(1866)

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

155-7 N. Michigan Blvd. - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aenaeobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.

5 S. Wabash Ave.

ST. LOUIS, MO.

4485 Olive St.—Corner Taylor

NEW YORK, N. Y.

18 E. 41st St.

PUBLISHER'S DEPARTMENT

HORMOTONE

G. W. Carnrick has given the medical profession some of its most useful therapeutic agents, and he is widely known as a chemist of high standing. One of his latest products is Hormotone, a tonic indicated by neurasthenia and all asthenic conditions, such as accompany old age, menstrual disorders, chronic cardiac cases, and disorganized circulatory conditions.

Physicians may obtain literature and samples of Hormotone from the G. W. Carnrick Co., 17 Sullivan St., New York.

SURGICAL TECHNIQUE

The establishment of a laboratory for the teaching of surgical technique by masters of technique through individual instruction, largely, was a very happy thought; and the Laboratory of Surgical Technique of Chicago (7629 Jeffery Avenue) has already demonstrated how efficiently work of this kind can be done.

We sometimes wonder how a teacher of music, say, of the violin can get five dollars for a lesson covering only a half hour. Many such teachers obtain such fees for every half hour in the day that they can work, and they do so because they have "technique" instruction of such value to impart to students who can absorb and use the instruction. Just so the student preparing for surgery or the experienced surgeon can absorb and simulate technique imparted by the master. A single suggestion that corrects a fault in a surgeon's technique may be invaluable to that surgeon and especially to the student of surgery who has begun to make a habit of a fault.

Our comparison is to show the great value of good instruction to the capable and earnest student.

The seven members of The Laboratory of Surgical Technique of Chicago are men who are thoroughly capable surgical teachers; and a course of a few weeks in this institution will do any man much good.

The rates are very moderate.

THE SYNDICATE BLOCK, MINNEAPOLIS

The Syndicate Block is in the very heart of the retail shopping business and the center of all the big office buildings, and therefore it is, as regards location, a very desirable building for physicians' offices. The new half of the building was only recently erected to replace the old one, which was destroyed by fire. The first and second stories are occupied by the great retail stores of the city, and the upper stories are given over to doctors and dentists. In the absence of street-cars and heavy trucks on Nicollet Ave., all offices on the upper floors are entirely free from noise.

The above conditions make offices in this building almost ideal; and the physician who does any considerable amount of office business cannot afford to overlook the comfort—even the whims—of his patients, so many of whom want to shop and visit the doctor's office in the one or two hours one can spend "down town."

The offices in this new building are entirely modern, and the service given tenants is beyond criticism.

LAVORIS

Lavoris was originally compounded as a mouth-wash, as its name indicates; and its base (zinc chloride) was taken from the armamentarium of the physician. Its originator simply put its base in stable form, and added some other well-known agents to make the preparation pleasing to the user, while they possessed slightly additional curative properties.

The preparation found its way into medical use because physicians recognized its curative properties when applied to all mucous membranes, and adopted it. Thus Lavoris was adopted by physicians, and was not forced upon them by intensive advertising campaigns based upon extravagant claims and testimonials.

Generous samples are furnished physicians who desire to give Lavoris a trial.

LIBERTY BONDS

The purchase of a Liberty Bond by a physician is "a bit" done for the Allies in an altruistic cause wholly akin to the work of his own profession; and in many a case such a bond may be the beginning of the habit of saving that will bring happiness to himself and his family. The interest now paid on these bonds robs their purchase of every gift element, for, certainly in small amounts, they are much more desirable to a physician or his widow than a six per cent mortgage with its element of risk and the trouble of re-investment at short intervals.

Physicians should head all classes of professional men in the purchase of Liberty Bonds, on both a per-capita and per-ability-to-purchase basis.

The Government needs the money; the physician needs the bond.

THE MINNEAPOLIS SANITARIUM

The Minneapolis Sanitarium is a home-like institution for the care of mild nervous cases and alcoholic and drug addicts. Such patients receive the best of care and scientific treatment on purely ethical principles.

Dr. R. M. Peters, a well-known medical man who has been a practitioner in Minneapolis for many years, is the medical director of the Sanitarium, and Mr. J. J. Baker, a thoroughly competent man in his line, is the manager.

Physicians throughout the Northwest may be assured that perfect satisfaction will follow any dealing they may have with this institution.

ASBURY HOSPITAL

This is one of the big hospitals of the Northwest. It has a magnificent building facing a beautiful city park in a quiet part of the city far enough from the street-cars to insure quiet and near enough for convenience of access. The hospital has five operating-rooms, a large maternity department which occupies an entire floor, a children's department which occupies one-half of a floor, an x-ray department, a pathological department, a training-school for nurses, etc.

It also has an atmosphere of the right kind; indeed, Asbury Hospital enjoys a unique distinction in that a society woman of large wealth occupies the position of active superintendent, and she superintends, not in the sense of "bossing," but of directing. She gives the hospital its atmosphere, and it is expressed in the hos-

pital motto,—“Not to be ministered into, but to minister.”

Like many of the best hospitals in the country, Asbury is a church hospital seeking to give all classes the best possible hospital advantages, charging for the services proper prices to all who can pay, and helpful prices to all in need. It is a hospital worth visiting, worth knowing.

KORA-KONIA

The physician, surgeon, or specialist in any branch of the medical profession, realizes the importance of having at hand, for regular or emergency use, therapeutic agents which have been especially designed to meet conditions present. This applies, not only to drugs intended for internal administration, but particularly to products used for the purpose of protecting the skin against irritation and for the relief of inflammation, pain, pruritis, etc.

A powder intended for use by the physician, surgeon, or specialist as a dusting or dressing powder should be composed of carefully selected ingredients, carefully compounded, and capable of exerting protective, absorbent, antiseptic, mechanically lubricant, soothing and healing action and effect.

The calls for such an agent are many and to meet the various indications, Kora-Konia has been introduced to the profession.

Many physicians use Kora-Konia exclusively, and many others are beginning to become acquainted with its all-round value.

For the dressing of burns or scalds, abrasions, or

minor wounds, accompanied by laceration, as a protective dressing for ulcers, moist or weeping surfaces, venereal sores, Kora-Konia is indispensable. It also acts as an ideal suture dressing, as a dressing in umbilical hernia and as a protective agent to prevent dressing or bandages from sticking or adhering to wounded surfaces.

A package of Kora-Konia should be kept in the office, in the obstetrical bag and in the emergency kit, and will be found to act as a friend in need and a dependable agent, which the doctor can ill afford to be without.

Samples of Kora-Konia will be sent to physicians on request to the House of Mennen, Newark, N. J.

AFTER THE LONG SCHOOL YEAR

The tired school child, whether girl or boy, is extremely liable to become vitally depressed, worn out both physically and mentally, and more or less anemic. With the coming of warmer weather, this depreciated condition becomes accentuated and it is the part of wisdom to take steps to build up the tone of the organism, enrich the vital fluid by creating new red cells, and hemoglobin, and employ every available means adapted to reconstruct the cells and tissues and restore the depleted vitality. Pepto-Mangan (Gude) does yeoman's service in such condition, by furnishing an agreeable, absorbable, and assimilable organic combination of iron and manganese, the agents most needed for blood repair, and general reconstruction. It is pleasant to take, and does not irritate the digestive organs or cause constipation.

Wherever there's Pain and Inflammation— there summon Atophan

Information and Literature from

SCHERING & GLATZ, Inc.

150 Maiden Lane

New York

Although Atophan—formerly imported, but now manufactured in the U. S. A.—was practically unobtainable for nearly two years, few physicians will have forgotten its unique physiologic action and therapeutic efficacy in **GOUT** and **ARTICULAR RHEUMATISM**.

It is the broader application of Atophan as a **Systemic Analgesic** and **Antiphlogistic** of strikingly prompt and enduring effect, non-depressant and safe, which may need recalling to your attention.

Whether the Pain be thought vaguely “**RHEUMATIC**,” “**NEURALGIC**,” or distinctly that of **NEURITIS**, **MIGRAINE**, **HEMICRANIA**, **LUMBAGO** or **SCIATICA**, let the Inflammatory Process be **IRITIS**, **LARYNGITIS** with **DYSPHAGIA**, or the burning and itching of **ECZEMA**, **PRURITUS**, etc., Atophan is indicated for relief and treatment.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, MAY 1, 1918

No. 9

CHRONIC VASCULAR HYPERTENSION IN THE AMBULANT

BY J. P. SCHNEIDER, M. D.

Assistant Professor of Medicine, University of Minnesota Medical School

This and the following three papers were presented before the Hennepin County Medical Society, on February 5, 1918, for the purpose of showing the character of the work done in the various Divisions of Medicine in the Out-Patient Clinic of the Medical School of the University of Minnesota.—THE EDITOR.

When Paul Dubois says, "Nature presents her phenomena with a thousand aspects, but man is liable to see only the one aspect which his eyes have been specially trained to see," we are reminded of the facility with which, thanks to our mechanical ingenuity, we "see" high blood-pressure—and promptly stop. Mere blood-pressure readings have secured for themselves an eminence so high and commanding as to frequently dwarf the underlying, consequential, associated, or co-incidental pathological states.

Chronic vascular hypertension is possible of classification as follows:

1. Hypertension associated with increased intracranial pressure,—tumor, hydrocephalus, etc.
2. Hypertension associated with asphyxia,—emphysema, asthma, laryngeal or tracheal stenosis, and broken compensation.
3. Hypertension associated with intoxications,—hyperthyroidism, lead, and anuria.
4. Hypertension associated with metabolic disorders,—diabetes and gout.
5. Hypertension associated with uterine fibromata.
6. Neurotic hypertension, affecting practically the systolic pressure only, fluctuating and present, particularly during paroxysms of hysteria,

at the climacteric and during a period of great emotional strain.

7. Hypertension associated with actual, demonstrable gross vascular disease:

- a. Vascular syphilis.
- b. Arteriosclerosis.

8. Hypertension standing in a causal relationship with kidney dysfunction in

- a. Diffuse glomerulonephritis.
- b. Granular kidney.
- c. Arteriosclerotic kidney.
- d. Congenital cystic kidney.
- e. Surgical kidney.
- f. Kidney of pregnancy.

9. Benign essential hypertension.

It is evident, therefore, that, in order properly to understand and estimate the hypertensive phenomena, all the above possible underlying or associated conditions must be investigated.

Clinically, such types as are associated with increased intracranial pressure, chronic asphyxia, intoxications, and errors of metabolism are readily segregated, make up but a small proportion of the total, and never approximate the high-pressure readings of the essential types. The same is true of the uterine and neurotic types, which have the unstable earmarks above indicated. Hypertension associated with extensive and readily demonstrable gross vascular disease, makes up a respectable proportion of the total, and offers abundant opportunity for the exercise of one's diagnostic and prognostic abil-

ity. While a high proportion owe their hypertensive feature to undoubted sclerosis of the smaller vessels of the kidney, a lesser proportion are consequent to a more or less long standing hypertension. By far the largest number of so-called decrescent arteriosclerotics fall outside the scope of this paper, in that they present no hypertensive phenomena at any period of their evolution. To differentiate from the ordinary sclerotic type the syphilitic vessel is to remember that the latter occurs, as a rule, in younger individuals, there is evidence of syphilitic aortitis,—aneurysm, coronary block, or pure aortic regurgitation,—and the serological reaction is positive with considerable regularity.

How far the chronic nephropathies are to be held accountable for vascular hypertension is dismissed, in the minds of many, by the observation that all are ultimately so caused. This, however, is probably not true; nor is the view that, unless undoubted urinary evidence in the shape of albumin and casts is present, the condition is to be regarded as benign.

Owing to the opportunity afforded us in the Out-Patient Clinic of applying to the ambulant hyperpietic functional kidney tests, of observing the patient repeatedly over a relatively long period of time (the time in many of this series covers two years), we have embraced this opportunity to gain a little more accurate data relative to this problem of kidney dysfunction and hypertension.

For the adequate estimation of the functional power of the total kidney parenchyma of a given individual, the routine urine examination must go into the discard. Not only is it woefully inadequate, but it is often positively misleading. Again and again the urine will show only traces or no evidence of albumin, and be free of all but a few hyaline or granular casts, and will yet prove to be from an insufficient kidney. In a paper, read in July, 1912, I stated in reference to this question that I had the temerity to diagnose contracted kidney in hypertension cases where, upon repeated examination of the urine, "not a trace of albumin could be found."

Since the urine is therefore unreliable, it is necessary that certain functional and metabolic studies be made in order to determine in a given case of chronic vascular hypertension its dependence upon or independence of a diseased kidney. Of such as can be applied without an inhibitive amount of laboratory training and equipment, and have withstood the assaults of time, are the following:

1. The phenosulphonephthalein test, involving the use of a non-threshold pigment, and requiring a minimum of time and preparation, is of decisive value in precisely this type of kidney lesion,—the chronic more or less terminal lesion,—associated with hypertension. There is not here the difficulty so frequently encountered in the parenchymatous types, whether of inflammatory, toxic degenerative, or passive congestion origin, in that the values of dye obtained in two hours permit of decisive deductions. A little over a year ago the case of a dental student was demonstrated at the weekly pathological conference by Dr. Rowntree and myself, in which the low value of 7 per cent output of dye in two hours immediately drew my attention sharply to the critical state of this ambulant patient, who insisted on going on with his work, but died within ten days, the post-mortem finding revealing contracted kidneys,—the final fruitage of an acute glomerulonephritis, suffered and apparently recovered from at the age of nine.

2. The test of renal function by gauging the ability of the kidney to put out a concentrated urine, is old, frequently emphasized by clinicians, often neglected because of its very commonness, and today again rehabilitated, chiefly through the work of Mosenthal. Again, this test of function applies with greatest force to the advanced kidney lesions. The ability to concentrate the deproteinized water of plasma which filters through the glomerular epithelium is dependent upon the total tubular epithelium present, especially proximal convoluted. If the latter has a greatly reduced square area of vital cell-activity the urine will be watery. During the night, when fluids are not taken, such concentration should lead to a morning specimen of at least a specific gravity of 1.020, in the absence of prostatic stimulation or anemia. The diffuse kidney, the granular kidney, and the late arteriosclerotic kidney cannot meet this requirement. The necessity for an adequate elimination of protein waste calls for much fluid medium per unit of solid; this in turn calls for a higher filter pressure (normal in glomerular capillaries of 30 mm. of mercury); and this in turn for a higher systemic pressure.

When the hyperpietic heart becomes decompensated the proper estimation of the values obtained from the phthalein output, and also from specific-gravity observations, is difficult. The former is markedly reduced by congestion, while, if the kidney is not a granular and advanced one, the latter will rise. When polyuria due to disap-

pearing edema is present there is a second factor to be carefully considered.

3. Tests in the blood for retention of uric acid, urea, and creatinin are relatively complicated; and, thanks to Folin, they are quite accurate and are coming more and more into favor. The earliest retention, or at least increase in value, occurs in the uric-acid ingredient. This is so generally true that a mere uric-acid increase in the blood on a low-purin diet may not be taken, per se, as evidence of gout, unless we are prepared to admit that gout is, after all, at least associated with a defective kidney-function.

Urea nitrogen is normally present in the blood in amounts of 15 to 16 mgms. per 100 c.c. In the estimation of this ingredient we possess the most valuable single indicator of serious renal insufficiency. In the acute and final stages of glomerulonephritis, late in the arteriosclerotic and in certain severe degenerative tubular types, the values of urea-nitrogen are increased manyfold. This is particularly true in the late hospital case, but, even if less bizarre, is, nevertheless, high enough to be decisive in the chronic ambulant. Unlike the phthalein and the specific-gravity study, urea-nitrogen values are less influenced by passive congestion. However, the test must be interpreted with judgment. When high for a few days in acute nephritis or acute exacerbations in a chronic case the prognosis is by no means bad.

The kidney is permeable to creatinin in the highest degree, which is, therefore, the last substance to rise in the kidney drama. In the ambulant patient it is seldom increased in such striking fashion as the hospital case presents a few days before death. Its value is prognostic, rather than diagnostic.

The material upon which the work of this paper is based consists of 100 cases of chronic vascular hypertension, 90 of which are unselected serial dispensary cases seen and studied during the past two years. Ten are private patients upon whom opportunity afforded metabolic studies.

The presenting symptoms which in these 100 patients impelled them to seek medical aid are, in the order of their relative frequency, as follows:

1. Dyspnea—42.
2. Headache—38.
3. Gastro-intestinal symptoms—36.
4. Nicturia—31.
5. Vertigo—30.
6. Palpitation—25.
7. Eye symptoms—9.

Their average age 51.5 years. There were 44 females, and 56 males. The Wassermann test was made often and repeatedly in 50 patients, 5 giving positive reactions. This is scarcely in accord with Stoll's studies on 50 hyperpiesics, 90 per cent of whom reacted with a positive Wassermann or luetin. Of the 100 there were 33 in whose urine there was albumin in considerable amounts and casts. Three had much pus. In 35 the specific gravity at times reached 1.020 or over; and 65 at no time concentrated up to 1.020. The phthalein test was made in only 25 cases, the average output of dye in two hours being 38.3 per cent. The highest value was 85 per cent, in a benign hyperpiesic; and the lowest was 7 per cent. The urea-nitrogen, determined in 42 patients, often repeated, gave an average of 25.1 mgms. per 100 c.c. The creatinin tests made in the same number, gave an average value of 3.4. In 12 cases where the urine at no time revealed albumin or casts, the urea and creatinin averaged as follows:

Urea—22.9.

Creatinin—3.34.

However, in all but one of these 12 the power of producing a concentrated urine was definitely absent.

In the final analysis of these 100 cases we find them occupying the following positions in our classification:

Of Class 1—None in our series.

Of Class 2—4, 2 of bronchial asthma and 2 of broken compensation with no original nephritic basis.

Of Class 3—3, all Graves' disease with hypertrophic left ventricles as yet undilated.

Of Class 4—none, not also possible of being placed in Class 7.

Of Class 5—none in this series; however, 2 such cases are on record antedating these serial cases.

Of Class 6—2, climacteric in type.

Of Class 7—subdivision *a* vascular syphilis, there were 4 definitely so, with (1) Wassermann in the blood positive, (2) substernal pain with aneurysm or angina or pure aortic regurgitation. One doubtful, as all such must remain in whom no clue as to a definite aortitis exists.

Subdivision *b* arteriosclerotic. To this class we applied the following criteria:

1. Palpable and visible (x-ray and direct) fibrotic or sclerotic vessels.
2. Failure of general nutrition and body-weight.

3. Urine preserving the ability to concentrate; casts and albumin absent.

4. Frequent hyperglycemia.

5. P. S. P. output normal, or nearly so, until late, when the "Kombinations form" develops.

6. No nitrogen retention. Of such there were 26 cases.

Of Class 8, subdivision *a*, the diffuse glomerulonephritic, applying the following points:

1. Urine containing much albumin and many casts.

2. Early edema, not due to cardiac failure.

3. Definitely anemic and frequent albuminuric retinitis.

4. Urea and creatinin values definitely above normal.

There were 16 cases. In these it is apparent that the urine alone is often quite sufficient to properly evaluate the significance of the hypertension.

Subdivision *b*, namely, the primary or secondary contracted kidney, applying these points:

1. History, frequently present, of post-scarletinal nephritis, streptococcic angina or pneumonia in the nearer or remote past.

2. Loss of ability to concentrate; often complete fixation of specific gravity.

3. Greatly reduced total two-hour dye output.

4. Maximal hypertrophy of left ventricle.

5. Relatively late, through intercurrent acute toxic swelling of the remaining renal epithelium, sometimes early, retention of urea and creatinin.

6. Maximal pressure-readings,—the diastolic average in this subdivision being 105.

7. Arteriosclerotic retinal changes, not infrequent. Many of this type of malignant hypertension, according to their ability to evade intercurrent disease, live fairly comfortably for years. Of this type there were 25, or 25 per cent of the total.

Subdivision *c* is covered by the general arteriosclerotic type, for without clinical evidence of this change we are left helpless.

Of Subdivision *d*, the congenital cystic kidney, there were 2, both in females, one aged 18, the other 28.

Of surgical kidney in association with hypertension there was 1 with pyonephrosis on the basis of stone, in whose case the hypertension has remained absent for two years following the removal of the diseased kidney.

Of Subdivision *f*, kidney of pregnancy, there were none.

Of Class 9, so-called benign essential hypertension, necessarily the "waste-basket" of hypertension cases, there were 17. The criteria applied to these were as follows:

1. Normal accessible vessels.

2. Retention of concentrating power.

3. No urinary casts, except an occasional hyaline or granular, or none but traces at times of albumin.

4. Normal, occasionally supranormal output of dye.

5. Normal urea and creatinin values, with a due appreciation of the meaning of a rise in uric acid in the blood.

SUMMARY

1. Applying functional, as well as clinical, criteria in 100 cases of hypertension—

4 were asphyxial,

3, thyrotoxic,

2, climacteric,

4, vascular syphilis,

26, arteriosclerotic,

16, diffuse nephritic,

25, granular kidney,

2, cystic kidney,

1, surgical kidney,

17, benign.

2. Had reliance, as of old, been placed largely upon albumin and casts in the urine at least 11 cases would have been erroneously added to the benign or idiopathic type.

3. Watched long enough 10 to 20 per cent of the benign type will eventually be gathered into the malignant, nephritic fold.

NOTE.—My indebtedness is acknowledged to Dr. Frederick Schaaf for the laborious work of gathering the data from my charts and of doing the metabolic studies on these patients, and to Dr. Charles Drake for his assistance on the clinical side.

GRAPHIC METHODS IN CLINICAL STUDIES OF THE HEART

BY OLGA S. HANSEN, B. S., M. D.

Assistant in Medicine, University of Minnesota

When a patient comes into the cardiac clinic of the University Dispensary he has either been referred from some other clinic for examination, or has been assigned by the nurse in charge because of precordial pain, palpitation, or some symptom suggesting heart disease. He is, therefore, considered a cardiac case until proved otherwise.

After a history and physical examination his symptoms are often found to be plainly non-

largely a sociological problem. A worker from the social service department attends the clinic to learn the social condition, the diagnosis and the plan of treatment. She visits the homes to see that directions are followed, and confers with the patient in regard to suitable employment during the period of restricted activity, which so often lasts for the life-time of a cardiac case.

When digitalis is used the effect is checked up by the electrocardiograph, and the progress of a case, as in aortic dilatation, is observed from time to time by the x-ray department.

The x-ray gives valuable information concerning the position, size, and shape of the heart.

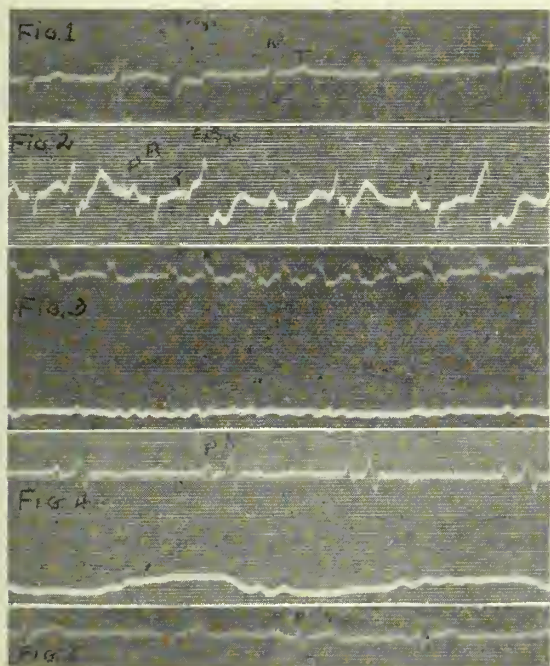


Fig. 1. Slow fibrillation. Small irregular waves, instead of normal auricular or P waves.

Fig. 2. Normal beats alternating with ventricular extrasystoles, giving paired beats at the radial.

Fig. 3. Paroxysmal tachycardia, rate 130, due to impulses arising in auricle, instead of in sino-auricular node.

Fig. 4. Same patient as Fig. 3 during period of slow rate, 64. Normal auricular (P wave) present.

Fig. 5. All waves are small in this tracing taken from Derivation I, suggesting drop-heart.

cardiac in origin, and he is referred directly to the clinic where he belongs. For example, a patient whose palpitation and dizziness are due to anemia is treated in the General Medical Clinic. If there is any suspicion of cardiac affection, even remotely, as extrasystoles in a hypertension case, the patient is subjected to intensive study by the Röntgen ray and the electrocardiograph, in addition to whatever laboratory tests seem pertinent.

After the diagnosis is made the treatment is



Fig. 6. Röntgen plate of patient with small complex in the electrocardiographic tracing (Fig. 5), showing drop-heart.

The type of hypertrophy, whether flattened or globular, as well as the dilatation of the various arches of the vessels and chambers, adds its evidence to the points of diagnosis of the valvular lesions. If a murmur is atypical in its transmission, if a chest is thick or emphysematous, the x-ray may furnish the piece of evidence which makes the diagnosis. Is this presystolic thrill with signs of aortic insufficiency an Austin Flint murmur or a mitral stenosis? The Röntgen examination shows a large horizontal heart with no auricular dilatation, and the conclusion is that the lesion is purely aortic.

The electrocardiograph, while it gives information about the hypertrophy of the chambers, finds

its greatest field in the arrhythmias. An auricular or atrial fibrillation offers no problem in diagnosis if rapid and accompanied by signs of decompensation; but, if slow with but slight variation in beats in a fairly compensated heart, it may need a graphic tracing to differentiate it from frequent extrasystoles.

In which part of the heart does an extrasystole originate? Is it spontaneous or following digitalis administration? Is a bradycardia of vagus origin or due to a heart-block? Is tachycardia due to vagus release or to auricular flutter? The electrocardiograph answers these questions.

Fig. 1 shows a slow fibrillation, rate between 60 and 70, with an occasional extrasystole, in which the time between ventricular contractions is so nearly equal as to be easily confused with a slow regular rate on casual examination.

Fig. 2 shows ventricular extrasystoles alternating with normal beats, following digitalis administration in a mitral regurgitation with compensated cardiac muscle. On feeling the pulse this might have been confused with *pulsus alternans* due to a weakened heart muscle.

Fig. 3 shows a paroxysmal tachycardia, rate 130, due to abnormal impulses arising in the auricle. Between paroxysms the rate is 64, showing a normal tracing except for occasional auricular extrasystoles, shown in Fig. 4.

In reading electrocardiographic records those with abnormally small waves in the first or third derivations, have been assumed to be due to drop-heart, and have been spoken of as the "small complex of the asthenic type." We have asked the Röntgen department to report on the heart out-

lines of these patients, and in a small series of cases have obtained interesting results.

Of twelve patients with this small complex in the tracings, seven show drop heart (two with mitral stenosis), three show mitral stenosis alone, and two only have normal cardiac outlines. Recalling the fact that mitral stenosis gives a vertically placed heart with narrow transverse measurements, it is not inconsistent that there should be a similarity in the tracings.

Fig. 5 shows the electrocardiographic record with a small complex in D I, and the drop-heart with dilation is shown in Fig. 6 by the Röntgen plate.

In cases with indistinct symptoms referred to the heart, sometimes occurring in broad athletic individuals with no hint of visceroptosis, the electrocardiograph gives valuable suggestive evidence of drop-heart, leading to the further investigation by the x-ray. It has been gratifying to reassure these patients about their heart symptoms, and still not place them under the rather derogatory label of "just neurasthenics."

NOTE.—The electrocardiograph is run at the University Dispensary Tuesdays at 2:00 o'clock. If anyone has a patient with an obscure arrhythmia or tachycardia he is at liberty to send him over with a note requesting electrocardiographic study. It should be kept in mind that the information may be of little value in regular hearts, giving little or no information unless there is an abnormal rate or rhythm. It gives no direct evidence of valvular disease, and you may get a perfectly normal tracing though you have marked clinical evidence of endocarditis.

ARTIFICIAL PNEUMOTHORAX—A DEMONSTRATION

By F. W. WITTICH, M. D., AND

E. S. MARIETTE, M. D.

MINNEAPOLIS

Toward the end of the last century, the frequent beneficial effects of a pleural effusion in pulmonary tuberculosis were observed. It was noticed that, upon the appearance of the fluid, the fever abated, the cough and sputum decreased, and the general condition improved, but after aspiration the symptoms returned to disappear again as the fluid accumulated. Galliard called it "providential pleurisy." L. Spengler, Mosheim, Konselman, and others studied it, and

ascribed the beneficial results to the immobilization of the lungs. Spengler even suggested the injection of silver nitrate to increase the effusion.

Carson, in 1821, noticed that an occasional improvement after pneumothorax occurred in advanced phthisis and in cases of traumatic pneumothorax. He also showed by animal experimentation that the lung may be collapsed without harm, and he suggested the process as a thera-

peutic measure in pulmonary tuberculosis, as well as a means for controlling hemorrhage. He actually treated a case by opening the pleura. Ten years later, Ramadge punctured the pleural cavity for treatment in a case of phthisis. Gayley, in 1885, caused collapse of the lung for pulmonary hemorrhage.

In 1882 Forlanini of Pavia because of the beneficial effects of effusion and spontaneous pneumothorax suggested collapsing the lung by injecting gas into the pleural cavity, but he did not begin to practice the method until ten years later. In 1894 he presented his results before the Eleventh International Medical Congress at Rome. In 1895 he reported a cure under prolonged treatment of injecting nitrogen gas.

In 1898 Murphy of Chicago, uninformed of Forlanini's work, independently originated a similar method of treatment. His assistant, Lemke, published fifty-three cases treated in his clinic. Although Brauer, in 1906, adopted this treatment enthusiastically in Germany, and was followed by Saugman, Muralt, and many others, it was practically abandoned in this country until 1911, when it was revived by Lapham, Rothschild and Floyd, and Robinson. Since that time the literature has increased enormously; and most of our phthisiotherapists are using the treatment when indicated.

The chief dangers of artificial pneumothorax are infection, air-embolism, and pleural reflex. When adhesions are present there may be difficulty in entering the pleural space and in determining whether the needle is in the pleural cavity. Collapse may be rendered difficult, painful, and, in many cases, impossible on account of pleural adhesions.

Opinions differ concerning the indications for collapse of the lung. Murphy urged compression in the earliest stages of the disease. Most of the reports deal with advanced cases, but recently the trend has been to select the moderately advanced case that is not responding to the usual methods of treatment. Some regard a progressive case when early as a suitable one, providing three or four months of the conventional treatment have not shown results. Artificial pneumothorax is justifiable in any case showing rapid progression of the disease is one lung with little or no involvement of the other lung, but where it is apparently only a matter of time until the other lung will be hopelessly involved. However, Minor, in reporting his first one hundred cases of pneumothorax, states that his experience with acute cases has led him to doubt whether they

should ever be treated by pneumothorax; but, he says, since so little hope of recovery can be given this class of patients by other means, it seems only fair to allow artificial pneumothorax a trial because occasionally it does cause the acute case to become a chronic one, with a possible chance of recovery. It is obvious that the aim in doing the operation is to give the badly diseased lung partial or absolute rest, and therefore the other lung must be in a condition to perform its function well, though it is not necessary for it to be entirely uninvolved. Compression is always indicated in dangerous hemorrhage, as in the patient we are now demonstrating. He had a progressive extensive lesion in one lung and early involvement of the other, and was having recurrent hemoptysis. In unsuitable cases the compression need not be continued. Recurrent pleurisy with effusion and chronic tuberculous empyema cases are suitable ones for pneumothorax, and, if lung abscess and bronchiectasis are not of too-long standing, the treatment is permissible. For caseous pneumonia it may be of value, although Forlanini finds that a similar condition may develop on the other side. We have given partial compression with considerable relief for distressing symptoms, such as fever, persistent cough, and expectoration, without any hope of arresting the disease.

A trial of the treatment should not be abandoned because of the history of the patient, or because an examination suggests little or no hope of success for cases that have seemed very unpromising on account of adhesions and have permitted of easy collapse. Adhesions make it impossible to collapse in about 25 per cent of the advanced cases. The frequent improvement of a beginning process in the opposite lung, in spite of its having more work to do, has been observed for a considerable time. Parfitt and Crombie placed the limit of disease allowable in the better lung at approximately one-third of the lung. The better lung may seem worse after compression because of the compensatory breathing and adventitious sounds, though the x-ray plates show a decided clearing up of the picture. It is probable that these changes are for a considerable part vascular. A weak heart-muscle, diseased kidneys, and severe intestinal tuberculosis are all contra-indications for this treatment. Tuberculous laryngitis may be improved by the lessened toxemia, cough, and irritation. Miliary tuberculosis and pneumonic phthisis are not suitable cases for its trial. Pregnancy is not a contra-indica-

tion. In early life the results of pneumothorax may be excellent.

Forlanini, Saugman, and others favor complete collapse; others, partial. This depends considerably upon the nature of the case and the condition of the other lung. If controlled carefully by the x-ray, it seems that the aim should be as nearly a complete collapse, brought about gradually by means of several refills without causing too much extra function in the other lung and without danger of rupture to the treated lung, as is possible. It is in only about 15 per cent of the cases that the lung can be completely compressed, for many patients can stand but small amounts of the gas without discomfort. A long time is necessary to effect a recovery in any tuberculous condition; and the treatment should not be undertaken unless this is understood. Occasional refills do not become tedious.

If the lung has been compressed satisfactorily the relief of symptoms is usually prompt, or, at least, the fever is reduced, the cough ceases or becomes greatly lessened, the sputum disappears entirely or decreases markedly, as well as changes in character, the bacilli often disappearing early, sweats stop, there is less tendency to hemorrhage, and the gastro-intestinal condition improves. The gain in weight is sometimes rapid.

Recently there have been slight modifications of apparatus and technic, so that the procedure has been much less dangerous than when first employed by the early pioneers. Briefly, the operation consists of entering the pleural cavity by means of a small aspirating needle connected by rubber tubing to a vessel containing air or nitrogen gas, and introducing the latter, under slight pressure. The use of a water manometer makes the operation comparatively safe and simple. The apparatus used here is a modification of Robinson and Floyd's. The amount of gas injected at the first inflation should be small, ranging from one to three hundred cubic centimeters. At the start inflations are made every

third or fourth day. When there is a complete, or nearly complete, collapse a week or ten days may elapse between inflations. Later, as the pleura loses its power of absorption, two to three or even six weeks may be the length of the interval between refills. Before a complete collapse a few hundred cubic centimeters of additional gas are given at each operation. Rarely is it necessary to give more than eight hundred cubic centimeters. The subsequent injections should be given in sufficient amounts to maintain a slight positive pressure. The pneumothorax, if uninterrupted by complications, may be continued for a year or more, and the lung then allowed slowly to expand. Pleural effusion occurs in about 50 per cent of the cases. This increases the danger of infection, but if the amount be small the effusion is sometimes beneficial and the treatment conservative. By carefully studying the manometer one can tell when the needle enters a free pleural space, whether the pressure is negative, or if the lung is punctured. It indicates the size of the pleural space, the pressure of adhesions and elasticity of the lung, and, by making readings at each inflation, the absorbing power of the pleura.

The pathological anatomy of a collapsed lung consists mainly of the extreme formation of fibrous tissue with the cessation of any fresh lesions. The alveolar epithelium becomes transformed, but remains intact and can be inflated again, the lymphatics become dilated from stasis, and rich pigment deposits occur. There is an increase in the red-blood cells; and the right heart hypertrophies.

Obviously, it is very difficult to differentiate and tabulate statistics in artificial pneumothorax, because of the diversified condition of the patients. An analysis of 1,145 cases treated by twenty-five American observers quoted by Farmer shows 22 per cent quiescent, arrested, or cured; 29 per cent improved, but mostly palliative; and 49 per cent not benefited.

THE TREATMENT OF GASTRIC ULCER IN THE AMBULATORY PATIENT

By CHARLES BENJAMIN WRIGHT, M. D.

MINNEAPOLIS

From the clinical standpoint, gastric ulcer, until comparatively recently, was looked upon as a very serious condition. To be sure, the pathologists for a long time have been finding scars of ulcer in the stomach and duodenum in about 3 per cent of individuals dying from all causes; but for a long time ulcers were recognized only by what they produced in the way of complications, such as fatal hemorrhage, peritonitis, intestinal obstruction from adhesions, etc. Duodenal ulcer did not become a clinical entity until 1887, and then only the very severe type was so recognized. It was not until surgeons found that the abdomen could be opened with relative safety, and exploratory laparotomy became common, that the frequency of ulcers was suspected. The frequency of duodenal ulcer was particularly startling, the Mayo Clinic demonstrating 2,300 cases of duodenal ulcer up to 1917 with a ratio to gastric ulcer of about 4 to 1, thus corroborating the experience of Moynihan, who had become so enthusiastic that he claimed that all cases of hyperchlorhydria were duodenal ulcers.

Notwithstanding the frequent occurrence of this condition, as established in the larger clinics, I do not believe that, among the profession at large, this fact has become sufficiently realized; and there are a large number of patients either treating themselves with soda and a more or less restricted diet, or being treated practically by the same method by physicians for hyperacidity without sufficient study to clear up the diagnosis.

By the careful studies of operative cases where ulcer was more or less accidentally found, and very largely by careful x-ray examinations by such men as Holtzknecht, Cole, and Carmen, we are now able to recognize these cases; indeed, our understanding of them is so much better that they can often be recognized by the history alone. Moynihan claimed that he could make the diagnosis even by correspondence.

What are the various data, clinical or otherwise, with which we arrive at the diagnosis of ulcer?

First, pain that comes with some definite relation to meals is present in practically all cases of ulcer. This pain is in the epigastrium, and may radiate around either side to the back or

up to the chest. We undoubtedly find pain in certain extra gastric lesions associated with pyloric spasms, such as irritative lesions of the pleura, chronic appendicitis, or chronic gall-bladder disease which cannot be differentiated, but, as a rule, it has not the definiteness or regularity of ulcer pain. Various other symptoms are of great value, if present, such as vomiting at the height of the pain with relief, vomiting of blood, or bloody stools. Occult blood in the stools is more important in eliminating cancer, as it is absent in 80 per cent of ulcers and present in 95 per cent of cancers. Vomiting of blood or blood in the stool in large amounts is important in the cases where this accident is the first symptom severe enough to induce medical aid.

The tender point in the epigastrium is present in over 50 per cent of cases. This point is just below the ensiform, or somewhat lower, and to the left. It can be elicited by pressure with one finger. Where the ulcer has gone deep enough to involve the peritoneum, tenderness over the lesion will be found.

Hyperchlorhydria, as determined by the test-meal, is valuable; probably more valuable still are the hyperchlorhydria of the fasting stomach and the determination of the amount of secretion. Using the fractional method of Rehfuess, the acid-curve of ulcer was found quite characteristic by Crohn and Reiss. The most characteristic feature was the plateau-like prolongation of the curve, percentages of acid as high as 116 being noted as long as two and one-half hours after the test-meal.

The clinical differentiation between gastric and duodenal ulcer is practically impossible. The radiation of the pain to the right and the longer delayed pain speak more for a lesion in the region of the pylorus; and hunger pain and pain at night are more characteristic of duodenal ulcer.

As regard the x-ray examination, I wish to emphasize two points: I believe the x-ray is invaluable in differentiating the medical gastric ulcers from the surgical; and it will, in most cases, differentiate ulcers from malignancy. This holds true of all lesions except those beginning high up in the cardia, which are infrequent. It is, of course, valuable in confirming the diagnosis

of simple ulcer, but it is invaluable for the two reasons previously mentioned.

Observing the treatment of ulcers, it would seem as if we ought to have some definite principle to follow in handling the various types of ulcer, but we find some internists advocating the treatment of all ulcers surgically. Others advocate the trial of medical treatment of all ulcers, with recourse to the surgeon in case of failure in six or eight months; and still others advocate surgical treatment first, and then medical. Finally, there are those who insist on the treatment of all cases without definite organic interference to the passage of food into the intestine, medically, excluding, of course, cases where there is a suspicion of malignant degeneration. All ulcer treatment, both medical and surgical, is symptomatic, and will be until the etiology of ulcer is entirely understood.

I cannot enter into a discussion of all the various theories of the causation of ulcer; but I would like to mention one fact, that is, the production of lesions of the alimentary tract by the introduction of micro-organisms into the bloodstream. We know that the conditions are ideal for the maintenance of an ulcer once formed in the stomach and the first part of the duodenum.

The focal-infection theory is much overworked, but every case of ulcer should be gone over with this in mind. The tonsils, teeth, sinuses, gall-bladder, appendix, prostate, and the pelves of the kidneys should all be investigated. In addition, constitutional conditions should be thoroughly looked for, such as chlorosis, gout, latent tuberculosis and syphilis.

Various methods of treating these cases have been devised, and each has its ardent supporters; but all seem to produce about the same results according to the statements of their adherents. The Leube, Lenhartz and Sippy treatments and their modifications are the most popular. They are all based on the neutralization of the hydrochloric acid by antacids, following varying intervals of starvation, and the frequent feeding of the most finely divided and easily digested food (Sippy uses only milk and cream, and Lenhartz advocates meat earlier, with the belief that it combines more readily with the free hydrochloric acid), eliminating highly seasoned or richly prepared food from the diet for a long time.

Complete rest in bed is emphasized by most authorities. After the preliminary period of starvation, aside from those cases that require

rest for general causes, such as anemia, weakness, nervousness, or marked decompensation of the gastric muscle, ulcer cases, I believe, do better with moderate exercise.

I believe posture has very little to do with inciting hemorrhage. The only two fatal cases of gastric hemorrhage I have seen were in patients lying in bed in a hospital. Hemorrhage is due to the erosion of a vessel, just as overdistension and necrosis are the most important factors in perforation. The great value of hospital care is the absolute control of the diet and of gastric acidity, granting that sanitary conditions are equally as good as at home. The best indication of progress in a given case is the amount of nourishment that can be given one without symptoms. Various methods have been given to determine cure, such as the x-rays, and this may be of great value, but the best evidence of cure at present is the fact that the patient is on a regular diet with entire relief from symptoms over a long period of time. Cases have been reported cured at subsequent operation and at autopsy, yet we know many of these ulcers recur, either at the original site or at some other location months or even years after a period of latency, after either medical or surgical treatment. The surgical cases do not recur so quickly because as long as the extra stoma is maintained in the stomach, the acidity is neutralized. Surgical statistics of cures are very misleading, as we know how infrequently surgical failures return for a second attempt.

In conclusion, I wish to report a few cases of ulcer I have treated in the University Dispensary during the last year.

The diet used is fashioned somewhat after that of Dr. Brown of Baltimore. As a routine antacid we use a salt of magnesia, magnesium carbonate or calcined magnesia for the laxative effect, our experience being that at least on a milk diet, a laxative is necessary. Where the laxative effect is too pronounced, we alternate with bismuth subcarbonate. Sometimes in addition a little soda bicarbonate, 10 grains to a dose, seems to help where there is some difficulty in controlling the pain for the first few days.

Where patients cannot be controlled or where the symptoms are severe, and particularly where there is any evidence of retention or marked hypersecretion, they are referred to the University Hospital, and only those cases which are mild or where hospital treatment is refused are treated in the dispensary.

The treatment is divided into three stages:

FIRST STAGE

First two days: starvation, and medicine every hour with all the water desired.

Second and third days: one-half glass of milk and cream, not too cold, every two hours, followed by powder.

Fourth, fifth, sixth, seventh days: 7:30 A. M., a glass of milk; one raw or poached egg and junket or gelatine every two hours; medicine one-half to one hour later.

The patient is kept on this longer if necessary, and the medicine may be increased and given at night.

SECOND STAGE

Second to fourth week:

Breakfast, 7:30—cereal (cream of wheat, farina, or grits) a glass of milk, and toast and butter.

10:30 A. M.—a glass of milk, malted milk, cocoa, or buttermilk.

Dinner, 1 P. M.—mashed vegetables (potatoes, squash, carrots, and peas); stale bread and butter; cottage cheese; soft-boiled or poached egg; junket or gelatine.

4 P. M.—same as at 10:30 A. M.

Supper—the same as at dinner.

Medicine one-half to one hour after meals.

This treatment may be prolonged, depending on the individual.

THIRD STAGE

Eat slowly. Cut up food finely. Chew thoroughly.

Breakfast—cream of wheat, farina, glass of milk or tea, two eggs, toast, zwiebach and butter.

Dinner—chicken, fish, baked or mashed potato, macaroni, rice, green vegetables (purees), custards, rice, or bread pudding, tapioca, gelatine.

Supper—cream of wheat, wheatina, farina, two eggs, toast, zwiebach with butter or cream cheese.

It is well to drink between meals a glass of malted milk or cocoa. Avoid fried greasy foods, hot breads, pies, cakes, candies, soups, condiments, pickles, tobacco, alcohol, coffee, too hot or cold drinks, coarse foods, and fruits (cabbage, cauliflower, turnips, onions, pineapple, banana, small-seed fruits, and cocoanut).

Advise the patients to stay on this diet for a year, taking antacids on the first indication of sour regurgitation, or heartburn. We also advise them to report at least once a month; and

we expect to have a trained social worker spend her time keeping in touch with these patients to see that they report at the clinics occasionally.

CASES

CASE 1.—A., aged 47, had two attacks of two years' duration; pain in the epigastrium radiating to the back; pain at night relieved by eating; hunger pains; tender point in the midepigastrium. Gastric contents: amount, 125 c.c.; free HCl, 57; total acidity, 67. X-ray findings,—small residue, wide pyloric gap, filling defect, prepyloric ulcer.

Treatment continued for six months, with immediate relief from pain, gain of eight pounds, eating regular meals, working every day, feeling fine, taking no medicine.

CASE 2.—H. A., aged 56, had one attack of three weeks' duration; pain in the epigastrium in early morning and before meals; loss of thirty pounds; constipated; sour regurgitation; tender point in the midepigastrium. Gastric contents: amount, 200 c.c.; free HCl, 35; total acidity, 50. X-ray findings,—no residue, cap deformity.

Treatment continued for nineteen days with loss of three pounds, no relief from pain, no improvement; referred to University Hospital. Six months later, regular diet, no powders, doing usual work.

CASE 3.—H. B., aged 36, had two attacks of one and a half years' duration with pain in the left epigastrium radiating to the right ribs from three hours after meals to next meal; pain doubles him up; loss of weight, slight; somewhat constipated; sour regurgitation; tender point at left above umbilicus. Gastric contents: amount, 125 c.c.; free HCl, 60; total acidity, 75; some blood in the stools. X-ray findings,—small residue, accessory pocket, lesser curvature.

Treatment continued four months; patient gained two pounds; pain entirely relieved; working every day; still must be careful about diet; takes medicine occasionally. Ten months later—gained ten pounds, well up to the last two weeks, has sour stomach at times.

CASE 4.—B., aged 27, had one attack of two years' duration, pain in the epigastrium at night and irregularly; somewhat constipated. Gastric contents: amount, 130; free HCl, 30; total acidity, 84; slight mucus; some blood in stools. X-ray findings,—hyperstalsis, cap deformity.

Treatment continued one month; gained five pounds, and pain relieved; working hard on the farm; considers himself well; eating everything in moderation. Nine months later—improved ever since treatment, still on restricted diet, doing regular work, no powders.

CASE 5.—M. B., aged 37, had two attacks of four years' duration; pain in the epigastrium radiating to the right abdomen at night two or three hours after meals; lost several pounds in weight; somewhat constipated; sour regurgitation; tender point in midepigastrium. Gastric contents: amount, 235 c. c.; free HCl, 55; total acidity, 77. X-ray findings,—small niche, lesser curvature. Gastric ulcer—lesser curvature.

Treatment continued for one month; gained three pounds; pain relieved; complete relief from stomach symptoms; has five children and is doing all of her own work. Three months later, very much better, diet general, no powders, doing housework.

CASE 6.—M. S., aged 19, had one attack of one month's duration; pain in the epigastrium radiating around both sides to the back three or four hours after meals; lost twelve pounds; somewhat constipated; sour regurgitation; tender point to left of the midepigastrium. Gastric contents: amount, 125; free HCl, 32; total acidity, 57; slight mucus. X-ray findings,—niche on lesser curvature. Penetrating, gastric ulcer.

Treatment continued twenty-four days; relieved from pain; feeling very well; thinks she is cured; still taking medicine; is on third-stage-ulcer diet.

CASE 7.—H. F., aged 23, had three attacks of five years' duration; depressed feeling in epigastrium two or three hours after meals; lost five pounds; vomits two hours after meals with relief. Sour regurgitation. Gastric contents: amount (?); free HCl, 43; total acidity, 63. X-ray findings,—no residue, cap deformity.

Treatment continued twenty days; pain relieved; feeling fine; is on third-stage-ulcer diet.

One year later,—temporary benefit, no diet, no medicine, doing usual work.

CASE 8.—N., aged 24, had attacks at intervals for three years; pain in the epigastrium one and one-half hours after meals; hunger pains; somewhat constipated; sour regurgitation; tender point below ensiform. Gastric contents: amount, 50 c.c.; free HCl, 74; total acidity, 91. X-ray findings,—cap deformity.

Treatment continued two months; gained eight pounds; pain relieved; has been doing hard work all summer; feeling fine; still taking magnesia carbonate at intervals for sour stomach. third-stage-ulcer diet.

Ten months later,—gained weight; rid of gas and vomiting; still has sore spot in stomach at times; diet somewhat restricted; doing usual work.

CASE 9.—B., aged 52, had one attack of two weeks' duration; pain in the epigastrium; constipated; vomits; sour regurgitation; tender point in the midepigastrium. Gastric contents: amount, 130 c.c.; free HCl, 47; total acidity, 76. X-ray findings,—niche at lesser curvature.

Treatment continued one month; pain relieved; working hard; feeling fine; gained weight.

Three months later,—felt fine, working up to Jan. 14, 1918, caught cold, some pain since, put back on treatment.

CASE 10.—U. M., aged 34, had interval attacks for six years; pain in the epigastrium radiates to right of chest one or two hours after meals; posture, doubles up at times; lost fifteen pounds. Sour regurgitation; tender point to left of umbilicus. Gastric contents: amount, 105 c.c.; free HCl, 44; total acidity, 67. X-ray findings,—irregular peristalsis, cap deformity.

Treatment continued twenty days; pain relieved; feeling better than for a long time; second-stage-ulcer diet; returned home; thinks he is cured. —

Three months later,—received a great deal of benefit from treatment; still on diet; taking powders at times; working every day.

CASE 11.—J. W., aged 34, had one attack of one month's duration; pain in left hypochondrium radiating to back at 9 to 10 A. M., and 3 P. M.; at night, doubles up; lost a few pounds; sour regurgitation; tender point in the midepigastrium to the left midline. Gastric contents: amount, 200 c.c.; free HCl, 60; total acidity, 84; some mucus. X-ray findings,—no residue, cap deformity.

Treatment continued six weeks; gained five pounds;

pain relieved; feeling fine; working hard every day as a machinist; still taking magnesia carbonate.

CASE 12.—A. L., aged 32; one attack of six weeks' duration; pain in the epigastrium three or four hours after meals; sour regurgitation; tender point two inches below the ensiform. Gastric contents: amount (?); free HCl, 64; total acidity, 98. X-ray findings (?).

Treatment continued one month; gained five pounds; pain relieved; feeling fine; working every day; still careful in his diet.

Eleven months later—cured; eats everything except pickles; takes no powders; doing usual work; gained twenty-two pounds.

CASE 13.—J. M., aged 25, had several attacks, of eight years' duration; pain in the epigastrium two or three hours after meals; lost some weight; somewhat constipated; vomits at times; sour regurgitation; tender point in the midepigastrium. Gastric contents: amount, 50 c.c.; free HCl, 74; total acidity, 96; some mucus. X-ray findings,—duodenal ulcer.

Treatment continued two months; gained seven pounds; pain relieved; working hard; feeling fine; takes magnesia carbonate occasionally; third-stage-ulcer diet.

Eight months later—much better since treatment; some pain at times; not eating heavy foods; still taking powders at times.

CASE 14.—S. B., aged 21; three attacks of two years' duration; pain in the epigastrium from one to two hours after meals; loss in weight very slight; blood; sour regurgitation. Gastric contents: amount, 45 c.c.; free HCl, 78; total acidity, 97; some mucus. X-ray findings,—marked cap deformity.

Treatment continued one month; no change; pain relieved; has felt fine since treatment; has lost no time in school; third-stage-ulcer diet; still takes magnesia carbonate.

CASE 15.—M. P., aged 39, had continuous attacks of eight years' duration; pain in the epigastrium radiating to the right after meals; time, irregular; lost six pounds; tender point in the midepigastrium to right umbilicus. Gastric contents: amount, 70 c.c.; free HCl, 42; total acidity, 61. X-ray findings,—incomplete filling of gap; probably duodenal ulcer.

Treatment continued one month; gained two and one-half pounds; pain relieved; feels very well except for sour taste in mouth at times; still taking magnesia carbonate, and is on the third-stage-ulcer diet.

Five months later—eats everything, not taking powders, doing regular work.

CASE 16.—P. O., aged 52, had one attack of two months' duration; pain in the epigastrium soon after meals; lost a few pounds; tender point in the midepigastrium to the left of midline.

Gastric contents: amount (?); free HCl, 28; total acidity, 70. X-ray findings,—small residue, doubtful cap.

Treatment continued one month; gained six and three-fourths pounds; feeling fine; working every day; third-stage-ulcer diet; taking magnesia carbonate.

CASE 17.—F. D., aged 26; had one attack of three weeks' duration; pain in the epigastrium soon after meals; relieved by food; lost twelve pounds; somewhat constipated; tender point in the midepigastrium above middle. Gastric contents: amount, 190 c.c.; free

HCl, 63; total acidity, 78. X-ray findings,—hypertonic stomach.

Treatment continued five weeks; gained seven pounds; pain relieved; feeling fine; third-stage-ulcer diet; taking some magnesium carbonate.

CASE 18.—C. S., aged 20; had one attack of two months' duration; pain in the epigastrium one hour after meals; lost ten pounds; vomits one hour after meals with relief; sour regurgitation; tender point in the epigastrium above middle. Gastric contents: amount, 10 c.c.; free HCl, 40; total acidity, 76. X-ray findings,—large residue; niche in lesser curvature.

Treatment continued one month; gained thirteen pounds; pain relieved, gained twelve pounds in the first month; feeling fine; back at work.

Four months later—all symptoms returned; lost five pounds; referred to hospital, where she improved very much and is still feeling well one month later.

CASE 19.—F. L., aged 60; had one attack of two months' duration; pain in the epigastrium two or three hours after meals; posture, lies on stomach; lost several pounds; vomits two hours after meals; sour regurgitation; midepigastrium very tender. Gastric contents: amount 200 c.c.; free HCl, 40; total acidity, 68; some mucus; some blood in stool. X-ray findings,—

penetrating ulcer in the lesser curvature, deep incisura in greater curvature.

Treatment continued six weeks; gained ten pounds; pain relieved; feeling fine; moderate diet; no medicine; several teeth pulled, and has plates.

Ten months later—a great deal of improvement; diet not restricted; no powders; taking care of invalid husband and two children.

CASE 20.—L. F., aged 22; had two attacks of six weeks' duration; pain in the epigastrium two hours after meals; sour regurgitation followed by two very profuse hemorrhages from the bowels; blood dark at first and then bright red; tender point one inch below ensiform. Gastric contents: amount, 100 c.c.; free HCl, 60; total acidity, 72; some mucus; some blood in stool. X-ray findings,—cap deformity, hyperstalsis.

Treatment continued one month; gained ten pounds, pain relieved; feeling very well; doing usual work as student.

One month later—continues to feel very well. Hg. gone up from 50 per cent to 70 per cent; red-blood count, 3,000,000 to 4,500,000; no blood in stools; still taking medicine, and is on diet.

Three months later—feels perfectly well; doing regular work; careful in regard to diet. Hb. 90 per cent.

MECKEL'S DIVERTICULUM AS A CAUSE OF SURGICAL LESIONS*

By A. L. McDONALD, A. B., M. D.

DULUTH, MINNESOTA

According to various authorities some remnant of the embryonic omphalomesenteric duct is present in at least 2 per cent of individuals. Nevertheless it seems to be the fortune of only a few surgeons to meet with any considerable number of the surgical lesions due to such remains, particularly those dependent on the diverticulum of Meckel. Furthermore, with the exception of the cases with a patent duct and congenital fecal fistula at the umbilicus, the correct diagnosis is rarely made, or even suggested, prior to operation or autopsy, if one is permitted to judge from the literature. A recent case under my own observation exemplifies this statement:

Baby O., a male child, eight weeks old, seen with Dr. A. G. Schulze, was admitted to the Children's Home six weeks before in poor condition, but has been gaining and improving on a milk mixture, with no emesis or bowel trouble.

February 1, 1917, the baby was vomiting with severe colic; and castor oil and an enema gave no results. At noon the next day the vomiting and pain continued; the temperature was normal; and the pulse was 120. A high enema gave no results except blood and mucus. I saw the baby in consultation on Feb. 2 at 5 P. M. at St. Luke's hospital.

Examination note: The baby is fairly well nourished; vomiting, definitely fecal in odor; pulse, 160; temperature, sub-normal; abdomen, distended and tympanitic; no mass or localized tenderness; rectal examination, negative. A high enema was expelled with blood and mucus, no gas or bowel movement.

Diagnosis: intestinal obstruction. Immediate operation was offered as the only hope.

Operation note: Hot water bottles arranged about the baby, and ether anesthesia used. A right rectus incision was made. The small intestine was greatly distended, and several coils of ileum were found strangulated under a band which proved to be a Meckel's diverticulum from the ileum about 25 cm. above the cecum. The fibrous portion was divided close to its attachment at the base of the mesentery, and the diverticulum excised. The strangulated bowel regained color, but an enterostomy with a tube was done above the obstruction. Camphorated oil was used while the patient was on the table; and the baby was returned to bed in an improved condition. Proctoclysis of a saline solution was done during the night, and pituitrin in small doses was given every four hours.

February 3. The baby, after a fair night, has a pulse of 130, and there was only slight emesis. The saline solution was retained, and there was considerable fecal discharge.

February 4. The condition was improved, the pulse was 120, and the temperature normal. Glucose was given by rectum; no emesis; considerable fecal discharge on dressings, and distention much less.

*Read before the St. Louis County Medical Society, Duluth, Minn.

February 5. A. M., the baby is improved, no emesis, two bowel movements and copious fecal discharge on dressings, has had dextromaltose by mouth. Late P. M., sudden collapse, increase of pulse and respiration, and death; no autopsy permitted.

On the basis of a somewhat extended review of the recent literature, the author feels that certain facts can be established and some suggestive conclusions drawn, which constitute the justification of this report.

Diverticuli of the small intestine may be classified as follows:

A. True diverticuli, composed of all the layers of the intestine,—mucosa, submucosa, muscularis, and serosa, except in the case of retroperitoneal diverticuli.

B. False diverticuli, more properly herniations of mucosa and submucosa, through weakened muscularis, occur most often in the aged or

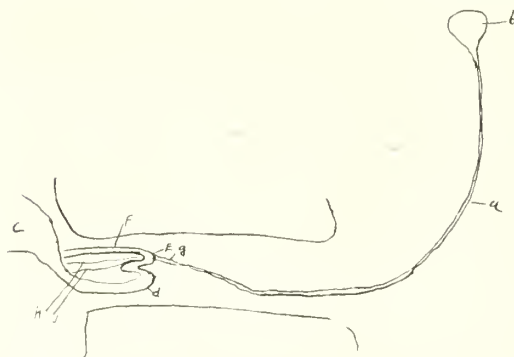


Fig. 1. Klessner's figure (from Mall & Keibel), showing umbilical cord of the human embryo of 3 months. A, vitelline duct; B, umbilical vesicle; C, stomach; D, coil of the gastric portion of the small intestine; EF, the anal part of the intestine; G, the cord of the umbilical vesicle, which corresponds in their description to the cecum and the vermiform appendix.

in cases where for some reason the intestinal musculature is weakened.^{1, 2} While there is some difference of opinion as to the etiology of these cases, they are probably due to an increased intra-intestinal pressure,—that is, they are pulsion-protrusions of the mucosa and submucosa through weakened muscularis, most often at the site of perforating veins, and they occur most frequently along the mesenteric attachment.

Most true diverticuli are congenital or secondary to congenital anomaly. A. Duodenal.^{3, 4, 5} According to Ritchie³, there are 76 well-authenticated cases of duodenal diverticuli described in the literature, of which but 7 were in the first portion. Buschli, quoted by Basch,⁴ collected 44 cases, distributed as follows: 33 in the second portion, 6 in the first, and 3 in the third, and 1 case with two diverticuli.

Three explanations of their origin may be presented:

1. Atypical development of the duodenum.—Keibel and Mall⁶ state that in embryos of 7 mm. the duodenum has a definite lumen lined with two or three layers of epithelium, while at a later stage it may be entirely obliterated by proliferating epithelium, and always contains vacuoles. Development of the surrounding mesenchyma may partly or completely cut off such a vacuole, which will then persist as a diverticulum or cyst. In rare cases the lumen becomes entirely obliterated, resulting in complete congenital atresia of the duodenum, as in a case reported by the author.⁷

2. Diverticuli may develop in connection with the papilla of Vater or accessory pancreatic ducts, Lewis & Thyng.³

3. Associated with accessory pancreatic or glandular nodules in the wall of the duodenum. Such masses give rise to diverticuli, either by

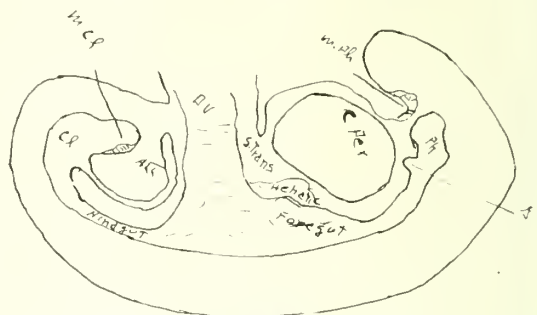


Fig. 2. From Keibel & Mall, showing the digestive tract in embryo 2.5 mm. long.

All, allantois; Cl, cloaca; Mcl, cloacal membrane; D V, vitelline duct; S Tran., septum transversum; Hepatic, anlage of the liver; Ph, pharynx; M Ph, pharyngeal membrane; G Th, thyroid; C Per, pericardial cavity.

dilatation of the lumen of the duct, or by traction of the mass on the intestinal wall. Nodules of this type are of not infrequent occurrence in young embryos,—pig, rabbit, or human,³ and account for certain duodenal diverticuli. Masses of so-called pancreatic tissue as described by some authors in connection with diverticuli of the lower intestinal tract, most often represent nodules of intestinal gland tissue, and are not truly pancreatic. Multiple diverticuli of congenital type have been described at lower levels of the intestine, the jejunum, or even the ileum.

Meckel's diverticulum is a definite anatomical structure, the remains of the omphalomesenteric duct, which normally degenerates in early fetal life, but in certain instances remnants persist, resulting in a number of anomalies. In order to understand these, it is necessary to follow the development of the yolk sac in relation to the gastro-intestinal tract. According to Keibel and

Mall,⁶ Oken, in 1806, first described the relationship of the yolk sac or umbilical vesicle communicating with the fetal intestinal tract by a duct which is afterwards obliterated. Keiser, in 1810, explained this by a drawing (Fig. 1), which is incorrect only in that the communication to the intestine is shown through the vermiform appendix, which he accepted as a normal remnant of the vitelline duct. Meckel, in 1812, presented the modern idea of this relationship through a duct which opens into the ileum about three feet (in the adult) above the cecum, and he described a number of specimens showing several types of anomalies. He states that even into the third month of embryonic life a small elevation is present in the lower part of the small intestine, representing a trace of the duct, and that, if this

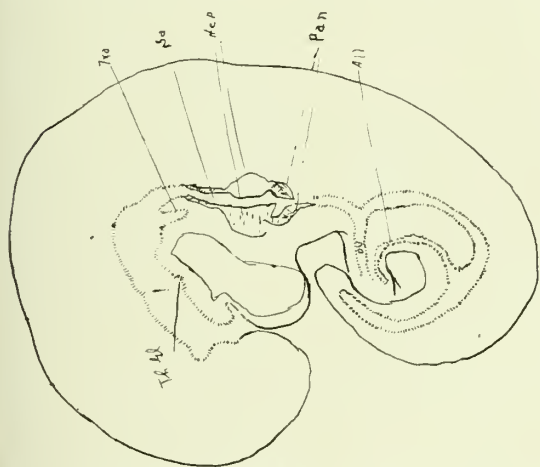


Fig. 3. From Keibel & Mall, showing the digestive tract in embryo, 4.9 mm. long.
All, allantois; D V, vitelline duct; Pan, pancreatic outgrowth; Hep, liver section; Ga, stomach; Tra, trachea; Th G1, thyroid.

is retained longer, it persists as a blind appendage. He also says that such a diverticulum is constant in ducks and geese. This observation is made by others. Bunts⁸ quotes Coues, an American ornithologist of about 1860, who described a true umbilical cecum or diverticulum as being common in lower forms of birds, representing the entrance of the embryonic vitelline duct. Huntington⁹ states that remains of the vitelline duct persist normally in certain birds as a "diverticulum cecum vitelli" about the middle of the small intestine, particularly in wading and swimming birds, but not in songsters and birds of prey.

The essential history of the omphalomesenteric duct is probably complete in embryos of from 4 to 5 cm. in length, and may be followed in four stages:

1. As shown in Fig. 2, the embryo develops from the side of the yolk sac, which is being included in the embryonic plate as the foregut and hindgut.

2. Fig. 3. In embryos of 4.9mm, the small yolk sac communicates with the intestinal tract through the slender vitelline duct, which is lined with cuboidal or cylindrical cells. The intestine seems to bend forward at this point, which represents the sixth primary intestinal loop; as described by Mall (McMurrich¹⁰).

3. Separation of this communication occurs usually in embryos of about 7.5mm (Fig. 4), though remnants of the duct are often found in the umbilical cord at a later period. Cullen¹¹ seems to indicate that this communication of the vitelline vessels may persist and be a factor in

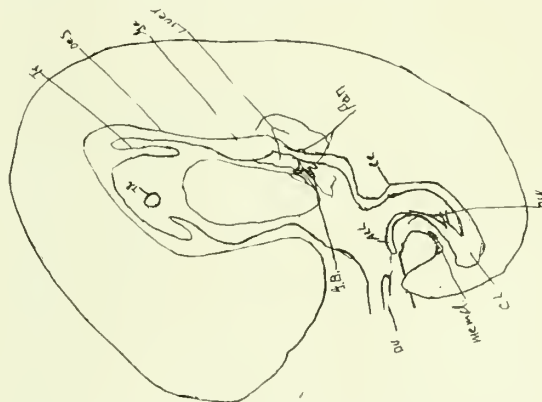


Fig. 4. From Keibel & Mall, showing the digestive tract in the human embryo, 7.5 mm. long.

Th, thyroid; Tr, trachea; Oes, oesophagus; Ga, stomach; Pan, pancreatic outgrowth; Ce, cecum and origin of the appendix vermiformis; D W, Wolffian duct; Cl, cloaca; Mem Cl, cloacal membrane; All, allantois; D V, vitelline duct separated from the intestine; G B, outgrowth for the gall-bladder and the pancreatic duct.

producing protrusion of the intestinal loop into the exocoelomic cavity of the cord, which represents the fourth stage, and is seen in embryos of about 20mm. Mall¹² states that the connection with the duct is severed before the intestinal loop enters the cord, and that this umbilical hernia is not due to traction, but to increased intra-abdominal pressure from downward growth of the liver, which temporarily crowds the moveable small intestines outside of the abdominal cavity. Return of the contents of the umbilical hernia to the abdomen takes place in a definite manner, and is normally complete in embryos of 40mm., at which time closure of the umbilicus takes place. Persistence of the vitelline duct or its attachment to the umbilicus during the period of the ventral hernia must be considered as abnormal, and, when it occurs, is a factor in producing anomalies arising

ing in connection with the omphalomesenteric communication. The vitelline arteries and veins are vessels of considerable importance in certain species. In man the left artery degenerates, leaving the right, which is eventually taken over as a branch of the superior mesenteric; while the right vein degenerates, and the left is finally included as a branch of the portal. Both vessels normally atrophy soon after separation of the duct, leaving no trace of their existence. Persistent remnants are usually associated with some type of Meckel's diverticulum, though traces of the artery may be found only at the umbilicus (Cullen¹¹).

The position in the intestinal tract where the vitelline duct is normally attached represents a fairly fixed point (McMurrich¹⁰), though some variation occurs, due to unequal growth of the intestinal tract above and below this point. Occasional descriptions of a Meckel's diverticulum from the jejunum are probably erroneous, and certainly the duodenum, which develops from the foregut, lying in the septum transversum, cannot be the origin of such a diverticulum. The point of attachment is given by various authors, as follows: Treves,¹³ 1 to 4 feet, or 30 to 120 cm.; Huntington,⁹ 2 to 3 feet, or 60 to 90 cm.; Gegenbauer, 50 to 100 cm.; Meckel, 1 to 4 feet, or 30 to 120 cm.; Tillmans, 33 to 133 cm.; Hemmeter, 30 to 180 cm. In a series of 120 cases collected by me, the distance from the cecum was specified in 26 instances, all within 100 cm. According to all observers anomalies of the vitelline duct are found in males about four times as frequently as in females. I am unable to find any explanation for this tendency.

The varying types of tissue described in rudimentary remnants of the vitelline duct are quite interesting. It will be remembered that the yolk sac is lined with cuboidal cells, and gives rise to all epithelium of the gastro-intestinal tract. Meyer¹⁴ describes the umbilical vesicle as being lined with cuboidal epithelium of a semiglandular type. It is not difficult to understand that remnants of this structure, whether found at the umbilicus or as a diverticulum, may contain tissue resembling various parts of the tract. It is most often that of the ileum, even including Peyer's patches. Less often the tissue, especially at the umbilicus, resembles that of the pylorus (Cullen¹¹). In 6 of my series, nodules of pancreatic tissue were described. It would be interesting to determine definitely whether these were simply masses of intestinal glands or actually contained islands of Langerhans.

A considerable number of serious lesions may be caused by remnants of the vitelline duct, but it is exceedingly difficult to estimate the relative frequency of each type. There are in the literature several exhaustive collections of special complications. Gray¹⁵ and Hertzler & Gibbon¹⁶ have studies of some fifty instances of intussusception collected from the literature, each series representing about the same cases. Bunts⁸ includes a series of some 20 cases of diverticuli in hernial sacs, and Halstead¹⁷ has collected 50 instances of intestinal obstruction due to bands from Meckel's diverticulum. Both these latter series are included in the much-quoted figures of Porter,¹⁸ and Wellington's¹⁹ series of 326 cases include at least three of the above collections. My series include the Gray and Hertzler lists. Therefore any conclusions drawn must be taken with some reservation.

Lesion.	Porter, 185 cases	Wellington, 144	Author, 19
Obstruction by bands.	101	144	19
In hernial sacs.	21	27	0
Intussusception	20	59	53
Volvulus	8	59	6
Diverticulitis	17	50	19
Patent at umbilicus.	5	21	4
Typhoid perforation.	5	6	9

Six per cent of 991 cases of intestinal obstruction were due to complications of Meckel's diverticulum, according to Halstead.¹⁷ Five per cent of 78 cases of intussusception were due to invagination of such a diverticulum (Drummond²⁰).

The possible complications resulting from persisting remains of the omphalomesenteric duct may be classified as follows:

1. Congenital hernia into the cord with adherent duct or vessels.
2. Remains of the duct at the umbilicus, causing polyps or tumors.
3. Patent duct open at the umbilicus.
4. Diverticulum of Meckel from the ileum attached to umbilicus.
5. Diverticuli unattached at the umbilicus:
 - (a) with cord-like remains of vessels attached elsewhere in abdomen;
 - (b) a saccular diverticulum constricted at opening to ileum;
 - (i) resulting in cyst formation, torsion, gangrene or diverticulitis;
 - (ii) volvulus of diverticulum and secondary twisting of bowel;
 - (c) short open sac, which may become prolapsed into bowel.

Congenital umbilical hernia with incarceration of a diverticulum and one or more loops of bowel will occur if a persistent diverticulum or vessels have been caught in the exocoelomic space of the cord. It will be characterized by unusual thickness of the cord, or the presence of an incarcerated umbilical hernia, either of which will suggest the possibility of such a congenital anomaly.

Remnants of the vitelline duct occasionally persist in the cord, and will be suggested by unusual thickness of that structure. They become evident as polyps, which do not heal by cauterization, mucous sinuses, or, later in life, by adenomatous tumors or cancer, either at the umbilicus or in the extraperitoneal space in that region (Cullen¹¹). The presence of any such anomaly at the umbilicus must be interpreted as evidence of abnormal persistence of the vitelline duct, and should suggest the possibility of an intra-abdominal remnant. In a considerable proportion of cases, abdominal exploration would demonstrate a diverticulum attached to the umbilicus, which could be easily divided and removed. Such a procedure could not be justified as a routine, but the possible association should be kept in mind by the obstetrician. The significance is to be impressed on the parents, so that the history may be given to a physician later should the child develop obscure abdominal symptoms. Furthermore, the history of anomaly at the umbilicus in infancy should suggest the possibility of a Meckel's diverticulum to the surgeon in considering possible causes for obscure abdominal conditions.

A patent duct open at the umbilicus will result if a diverticulum is caught in the cord and cut or ligated with that structure. It becomes evident when the ligature sloughs, as a mucous or fecal fistula, and persists until a suitable surgical procedure is instituted. Besides the fistula there may be (a) a relatively long narrow band extending to the ileum, which may cause intestinal obstruction by strangulation, or volvulus of the dependant loop of ileum; (b) a short, wide diverticulum communicating directly with lumen of the ileum, presenting the possibility of several types of evagination of the intestine, resulting in polyp-like protuberances accompanying a fecal fistula, and eventually causing obstruction. These conditions are well described by Corner,²¹ Eisendrath,²² and Cullen.¹¹

A diverticulum extending from the ileum and attached at the umbilicus by a cord-like structure consisting of remains of the vitelline vessels

represents a type frequently causing obstruction. The presence of this condition may be suspected by a history of anomaly at the umbilicus at birth, or of repeated abdominal symptoms with pain referred to this region. The condition may be caused by (1) one or more coils of intestine being strangulated about such a cord, or (2) by torsion and volvulus of the attached loop of ileum. In my series of 120 cases, 20 diverticuli were attached, of which 11 extended to the umbilicus. In Porter's¹⁸ series, there were 101 obstructions due to bands, 22 of which extended to the umbilicus.

A diverticulum from the ileum unattached to the umbilicus may assume a variety of forms. The length may be from 2 to 24 cm., the latter measure being the longest I have found recorded. It varies in size from that of a goose-quill to that equal to the ileum. I have classified them into three types:

1. A long, slender structure with the terminal end attached to some other point in the abdomen, causing obstruction by band formation. Of 145 diverticuli found at autopsy not presenting lesions, 136 were unattached; while of 162 with serious lesion, 110 were attached to the umbilicus or other point. (Turner, quoted by Griffith.²³) The attachment usually represents the original vessels extending from the mesentery or post-abdominal wall to the tip of the diverticulum, instead of along its wall or in a true mesentery, as described by Eisendrath.²² Attachment may also arise secondarily should the tip become adherent, as it may, to almost any point in the abdomen in hernial sacs, or be caught in a loop of bowel or volvulus. The relative frequency of various sites of attachment are represented as follows:

By Porter¹⁸: Mesentery, 29; intestine, 11; and in hernial sacs, 21 (umbilical 10, inguinal 9, scrotal 2).

By Eisendrath²²: Mesentery, 34; anterior abdominal wall, 4; umbilicus, 21; pelvis, 5.

The presence of a thick band causing obstruction should suggest a Meckel's diverticulum, especially if one end is attached to the bowel. Such bands must be divided between clamps, and excised, the opening into the bowel being closed with a purse-string or mattress sutures in the long axis of the gut.

2. A short sacular diverticulum constricted at its opening to the ileum can give rise to three types of complications: (a) Cystic dilatation of the sac, which may even lose its connection with the intestine; (b) Strangulation of the sac resulting in gangrene or diverticulitis, which occurs

not infrequently and is characterized by repeated attacks of abdominal distress, culminating in a more or less sharp peritonitis. The course and pathology resemble that of appendicitis, for which it is commonly mistaken. The location of pain is atypical, general peritonitis more common, the necessary surgical procedures more complicated, and the prognosis much more grave, at least 40 per cent in a series of 50 cases (Wellington¹⁹). Constriction and inflammation at the tip of a long diverticulum may result in the formation of adhesions, and accounts for some of the unusual sites of attachment mentioned above. (c) Adhesions or volvulus of a sacular diverticulum may cause twisting of the dependent loop of ileum, resulting in obstruction.

3. A short, wide diverticulum may be associated with congenital deformity or constriction of the ileum as is a case reported by Watson Cheyne.²⁴

Foreign bodies have been known to lodge in an open diverticulum, and cause inflammation or perforation. A unique case was reported by Peck,²⁵ in which a Murphy button which had been used for gastro-enterostomy several years before, lodged in a diverticulum, and finally caused obstruction. Not infrequently the sac, or at least its mucosa, becomes prolapsed into the ileum, forming a polyp. This may be associated with inflammatory thickening of the intestinal wall, resulting in some type of obstruction. More often it is found with intussusception, causing 6 per cent of 78 cases.¹⁹

The mechanism of invagination of a diverticulum and the development of an intussusception have several explanations. A glandular nodule or tumor at the tip is said to stimulate peristalsis of the diverticulum, resulting in the inversion of that structure into the lumen of the ileum, and intestinal peristalsis completes the process. Irregular peristalsis, for some reason, causes inversion of a widely opened diverticulum, forming a polyp, and finally an invagination of the intestinal wall at this point. Thickened mucosa of the diverticulum extends into the lumen of the bowel, and results in invagination of the entire structure. Certain it is that the presence of such a polyp is a serious predisposing factor in the production of an intussusception, which is peculiar in three particulars: (1) It arises higher in the intestine than does the common type which comes to operation; (2) It is found most often in the compound form; (3) It occurs more often in older children and adults, in contradistinction to the ordinary types, which are seen most often in babies. According to Corner,²¹ intussuscep-

tion which comes to operation is most frequent in the ileocecal region, and is compound, that is, consists of an ileo-ileal invagination, which is caught in the valve and invaginates the colon. The ileo-ileal portion is the hardest to reduce, and is often overlooked, especially in the non-operative reduction. Those of the simple type which occur higher in the ileum are usually reduced spontaneously, and rarely come to operation. Discovery of an intussusception higher in the intestine, especially if it is compound, should suggest the presence of a polyp, usually an invaginated diverticulum. This also applies to cases of intussusception in older children or adults.

CONCLUSIONS

1. Meckel's diverticulum is a definite structure, and when present shows a characteristic group of possible clinical conditions.

2. Certain anomalies of the umbilicus depend on persistence of portions of the vitelline duct, and, in a considerable proportion of cases, are associated with intra-abdominal anomalies.

3. The history of such umbilical conditions in infancy is extremely important in suggesting the possibility of a Meckel's diverticulum as the cause of obscure abdominal conditions later in life.

4. In the absence of previous abdominal inflammatory lesions, bands causing intestinal obstruction should be examined most carefully for Meckel's diverticulum and treated accordingly.

5. Intussusception in older children and adults—the variety developing high in the ileum, and compound forms—are frequently due to inversion of a Meckel's diverticulum, forming an intestinal polyp which may easily be overlooked.

REFERENCES

1. M. H. Fischer: *Jour. Expt. Med.*, 1901, vol. 33.
2. Hartwell & Cecil: *Am. Jour. Med. Sc.*, cxi, 174.
3. Lewis & Thyng: *Am. Jour. Anat.*, 1907-1908, vol. vii.
4. Basch: *Am. Jour. Med. Sc.*, cliii, 833.
5. Ritchie & McWhorter: *Surg. Gynec. & Obst.*, xxv, 485.
6. Keibel & Mall: *Human Embryology*, J. B. Lippincott Co.
7. McDonald, A. L.: *Am. Jour. Med. Sc.*, cxlvi, 28.
8. Bunts: *Ann. Surg.*, xl, 536.
9. Huntington: *The Abdominal Cavity and Peritoneum*.
10. McMurich: *The Development of the Human Body*, Blakeston.
11. Cullen: *The Umbilicus and Its Diseases*, Saunders.
12. Mall: *Bull. Johns Hopkins Hosp.*, 1898.
13. Treves: *Applied Anatomy*, also *System of Surgery*.
14. Meyer: *Am. Jour. Anat.*, vol. iii.
15. Gray: *Ann. Surg.*, 1908, xlviii, 801.
16. Hertzler & Gibbon: *Am. Jour. Med. Sc.*, 1913, cxlvi, 364.
17. Halstead: *Ann. Surg.*, vol. xxv.
18. Porter: *Jour. Am. Med. Assn.*, xlv, 883.
19. Wellington: *Surg. Gynec. & Obst.*, xvi, 75.
20. Drummond: *Ann. Surg.*, lv, 404.
21. Corner: *Ann. Surg.*, xxxviii, 690.
22. Eisendrath: *Ann. Surg.*, l, 1278.
23. Griffith: *Jour. Am. Med. Assn.*, lxii.
24. Cheyne, Watson: *Ann. Surg.*, xl, 796.
25. Peck: *Ann. Surg.*, xlix.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
H. J. ROWE, M. D. - - - Casselton, N. D.
H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

MAY 1, 1918

CHILDREN'S YEAR

Two thousand baby lives will be saved to Minnesota, two thousand mother-hearts will be saved from bereavement, two thousand homes will be saved from loneliness and mourning,—if Minnesota does her share of the country's duty to the rising generation, throughout Children's Year, which has just begun. For seven days, the city of Minneapolis will concentrate its energies upon this one great task of baby-salvage, than which there is no greater and more urgent patriotic duty. Child-Welfare Week begins on Sunday, May 12. On that day pastors will plead the cause of the babies from their pulpits, and the children in the Sunday-schools will be asked to devote their pennies to a fund for aiding their less fortunate little brothers and sisters. What could be more fitting than that the children themselves should be encouraged to help, in this way, the activities of the week which is to be devoted to their welfare?

One of the many original features which will distinguish this week's campaign from all Baby Weeks that have preceded it, will be the block census, which will be undertaken by the Woman's Council for National Defense. Under the direction of thirteen ward-captains, 1,600 women will visit about 60,000 homes. At every home they will leave a bulletin containing the program of the week's meetings, clinics, and so forth, and a statement of the purpose of the work. They will also leave a test-card to be filled out by a

parent, nurse, or physician, with details of the health of all children in the family below the age of six; and, wherever possible, they will speak personally with the mother, and urge her to avail herself of the expert advice, for herself and her little ones, that will be obtainable throughout the week at various special clinics.

Washington is being urged to draft the local Four-Minute men as speakers during the week in all parts of the country. They would present the patriotic phase of this great effort, unparalleled in any age or country, to save the lives of the little ones. One hundred thousand is the number of the children who, it is estimated, die in the United States annually of preventable diseases, before they reach the age of five. Minnesota's quota of this appalling total is 2,134 children.

In past years only those fortunate enough to be still under two years of age were the object of concern. This year the age-limit is being raised to six years, the school age.

Mrs. A. W. Strong, chairman of the Minneapolis Woman's Council for National Defense, and one of the leaders in the week's campaign, announces that it has been decided to adopt the plan of local neighborhood exhibits which was inaugurated recently by the Anti-Tuberculosis Committee of Minneapolis and found to be so satisfactory. It is felt that by holding the exhibits in community centers, it will be possible to win the closer co-operation of mothers through local organizations which will be asked to help to conduct the exhibits.

THE SLOWLY INCREASING MEDICAL CORPS

There are at the present time between 700 and 800 physicians in the regular medical corps and over 17,000 in the medical reserve, about 14,000 of whom are in active service. In addition, there are between 3,000 and 4,000 commissions out which have not yet been accepted for the medical reserve, mainly because the physicians are waiting for examinations, inoculation, etc. The Navy has a fine body of medical men, in all about 2,200. Add to this the Public Health Service of between 500 and 600, and we find that close to 25 per cent of the entire medical profession in the country under 55 years of age are in service, or getting ready to serve, really a higher percentage of men than has been taken in on the draft between the ages of 21 and 31.

Minnesota has evidently done its full share in furnishing physicians, and the state ranks seventh

in percentage in the number of physicians sent into the Medical Reserve Corps with surgeons' commissions. It is estimated there are 2,447 physicians in Minnesota; 445, or 18.2 per cent, have either been commissioned or recommended for commissions in the Medical Reserve Corps. Nevada stands first, 37 of the 154 physicians in that state having been commissioned. Arizona, Montana, Pennsylvania, Maryland, and Oregon, in order, are the other states leading Minnesota.

American physicians are enrolling perhaps not as fast as they should, but in sufficient numbers to warrant us to assume that they will respond to the call of the Government. This will mean much sacrifice, but it will make the work much better in every way in spite of the delay or the obstacles that are seemingly in front of the man who is to enlist for medical service.* There is no doubt but what the medical profession will be treated well, first, because the Surgeon-General, Dr. Gorgas, is a very broad-gauged man, and he has with him many sympathetic and helpful surgeons throughout the country; and so far the medical department of the Army is one of the best prepared of any of the departments. Of course, among the number of applicants there will be many who will be turned down, first, on account of illness or accident, or other unforeseen contingencies, but their places will be filled with men who are inspired, as time goes on, to do something for their country in a medical way. It is not well to feel in any way that the enrollment is complete. It is far better to have a safe margin maintained at all times rather than to have a deficit in the numbers called or enlisted. Some of the physicians have been put to no small inconvenience because when they were advised that their services would be required they dropped their office and general work and prepared for active service. Dr. Franklin Martin says that physicians who enroll are advised not to relinquish their practice until informed by the Surgeon-General's office, and usually about fifteen days' time is allotted to the man who is to be ordered into service. This gives most men time to adjust their affairs between the time they receive orders and the date upon which they are expected to report.

All meetings of physicians and surgeons of whatever kind are being addressed by doctors called by their state committees who are co-operating with Washington, advising our men as to what they should do, how they should apply for service, and what is expected of them; and at every medical society one may expect to hear

something about the war needs and the relations of the surgeon and physician to this department.

A NEW DISEASE IN THE ARMY

Lieutenant-Colonel Pearce Bailey, in a talk before the New York Academy of Medicine, discussed "Neuro-Psychiatry and the Mobilization," and described a new disease resembling rheumatism which appeared in the armies here and overseas. This ailment takes the form of a misshapen back following a period in military life. Some of these cases have been extraordinary in their deformities, and not infrequently the soldiers who are exposed to shell-shock acquire these deformed backs only from military causes. Some of these cases have been found in camps where there have been no explosions, that is, camps in this country; but it is evident that there is a connection between military life and these new types of deformity.

Lieutenant-Colonel Bailey further discusses the accidents which occur among aviators, and believes that they are due to the fact that the aviator is not physically fit for his work. These men may have passed the aviation tests successfully, and yet, when they get in the air, they are useless. Now, the new tests have taken into consideration the altitude and under what conditions these men may be safe. This is done largely by gradually withdrawing the oxygen, thus simulating conditions at various altitudes. He cites as an instance that where a man goes high enough he sees double, and therefore is unable to read his instrument. While this test is being performed the candidate's heart is very carefully watched. This same question has been discussed in various medical societies, and perhaps some criticism offered by the men who test the aviators in that they consider only the eye and ear tests, either overlooking or neglecting or forgetting the physical fitness of the man. A very carefully taken history of these people and a thorough examination from both a physical and a neurological standpoint would probably eliminate many of these unfit physically, although seemingly competent in the air.

Lieutenant-Colonel Bailey discusses also the showing at some of the camps, notably Camp Upton, which has the lowest proportion of mentally deficient men of any camp, whereas in Wisconsin, Michigan and southern Pennsylvania camps, where immigrants form a large part of the population, the greatest mental deficiency was shown. Naturally, with such close proximity to

a large city, Camp Upton has the greatest proportion of drug addicts, 18 per cent of all nerve cases being attributed to this cause, while only 10 per cent, which is really a large percentage, were mentally deficient. Camps located on the Mexican border and on the Pacific Coast, where the drug traffic flourishes, very naturally show a high percentage of drug addicts.

These conditions will be cared for by the neuropsychiatrists who examine and eliminate the majority of these unfit people. Each division will have a ward of 100 beds for the insane so that the soldier temporarily insane, will not be forced to appear in this condition at home, that is, this man will be returned disqualified, but improved by such treatment as warm baths and medical treatment. Or, if he shows sufficient improvement, he will be returned to his company work.

It is quite evident from what we learn of the inspection work of medical officers in the various camps that the neurologist and the psychiatrist is going to assist in the elimination of many men who slipped by the local boards and the advisory boards. It is impossible thoroughly to weed out these people at the first and second examination, but when they once get into camp they rapidly show their abnormal state and can be easily eliminated from service abroad or can be benefited sufficiently so they may be of some service at home. With all these cantonments springing up all over the country it is quite necessary that there should be a sufficiently large force of experienced men in all departments, in all ranks, to remain there. They are able to do this sort of work, but are not able to fight. In that way they are doing a service for the country just as is the fighting man abroad.

REPORT OF THE MINNEAPOLIS CLINIC WEEK

It was the desire and plan of the Executive Committee having in charge the Minneapolis Clinic Week to publish in this issue of THE JOURNAL-LANCET a report of every clinic given during the week. Timely and urgent notice was sent to every medical man taking part in the clinics to furnish a report of his work. Over one hundred and fifty notices were mailed to the staffs of the fourteen hospitals taking part in the Clinic. We dare not say how many (how few) replies were received. It is enough to know that they were expected from medical men! His soul rests in peace while still in the body on earth. He is a good fellow, but not a hustler in a

simple report, especially if such report is about himself and his own work.

As we have some reports on hand we can confidently promise to publish that much of the week's work in our next issue. We shall confidently expect at least a few more of the outstanding reports.

A CORRECTION

In an editorial in THE JOURNAL-LANCET of April 1 on increased rank of medical officers, the editor made a statement which was not verified, saying that the President and Secretary of War were not in favor of the Owen bill. The information came from a newspaper clipping, and was hurriedly written and sufficient time was not taken to verify the truthfulness of the statement. The correction is that the President and Secretary of War are both in favor of the Owen bill. Both the President and Secretary Baker recognized the necessity for an increased rank among medical officers, and the object of the bill is to put the Army medical service on a level with that of the Navy. The Naval practice has been in force for two years, and it has worked so successfully that all of the men who are interested in the success of the Owen bill are working to put the Army medical bill on the same basis. We know that most of the medical men who are in service now recognize the necessity of increasing the rank among its medical officers.

REPORTS OF SOCIETIES

THE MINNESOTA ACADEMY OF MEDICINE

The regular monthly meeting of the Academy was held on April 3. No papers were read, but an unusually large number of case-reports, specimens, and clinical cases were presented.

Dr. E. M. Hammes presented a case of myasthenia gravis, the interesting features of which were the early onset of the disease, coming on at the age of ten, a double ptosis, immobility of the right eye, and only a limited movement of the left eye. There was also some difficulty in swallowing. The electric examination gave a myasthenic reaction. He also showed a brain tumor obtained at necropsy of a patient whose clinical history he related.

Dr. L. C. Bacon brought to the meeting a young man on whom a resection of the rectum and anus had been made more than a year before. The operation was performed to relieve an obstructing growth. The patient has been able since the operation to move the bowels with ease and regularity through the artificial opening made in the left iliac region.

Dr. H. B. Sweetser reported a case of extra-uterine gestation that fulminated within a period of fifteen or

sixteen days after intercourse. The patient was a healthy woman twenty years of age. She gave the following history:

In July, 1916, she married, but separated from her husband after eight months. Her menstrual periods were regular and normal, the last flow occurring on February 11 of this year. On February 24 she had sexual relations with a sweetheart about to leave for a military training-camp. On March 11 menstruation took place in the morning, and was accompanied with the usual discomforts. At three o'clock in the afternoon she felt ill enough to go home, but this was not an uncommon thing for her to do at such times. The following morning she was seized with a sudden and severe pain in the abdomen; at ten o'clock she vomited. The pain continuing, she called in Dr. Deziel. To his question whether she might be pregnant, she answered that she did not think so. This reply convinced him that she might, whereupon he made a diagnosis of ectopic gestation—a diagnosis which few would feel like making with so little to go by. At any rate, he was right, for she was taken to the hospital and operated on on the same afternoon, and the ruptured tube was removed. At the time of the operation she was pale, the pulse was 120, and plenty of free blood was found in the abdominal cavity. The uterus was slightly enlarged. There were no adhesions. The right oviduct was normal, as was the left except for the enlarged and ruptured area wherein was implanted the fertilized ovum. This was located about an inch from the uterus, and in size is, as may be seen in the specimen, about as large as a small hazel-nut. The blood in the peritoneal cavity was not removed. Recovery was prompt and the patient left the hospital in twelve days.

Dr. Arnold Schwyzer presented several pathological specimens of goiter, gastric ulcer, and carcinomata, which were briefly described and their essential points of interest brought out by means of pictures and x-ray plates.

Dr. A. S. Hamilton exhibited two brain tumors and a tumor of the cord with the following histories:

CASE 1.—Tumor of the spinal cord. The patient was a girl twenty-eight years of age. One year ago she first showed signs of what later proved to be a well-developed attack of dementia precox. In July, 1917, while still in fair mental condition, she consulted a doctor on account of pain in the lower dorsal region of the back. The pain increased in severity, kept her awake at night, was worse on movement, stabbing in character, and seemed to radiate in a definite line, at first in the right thigh and later in the right abdomen. She grew steadily weaker, and eventually lost power of motion in the right lower extremity. One month later the left leg also became weak, and she was scarcely able to move when seen in December. There was marked loss of all forms of sensation up to the eleventh thoracic segment. Furthermore, there was involuntary urination and defecation; there was motor and sensory paralysis of the legs; absent lower and present upper abdominal reflexes; double ankle and patellar clonus; and double Babinski. The knee-jerks were much increased. The spinal fluid showed cell-count 2; Nonne, negative; colloidal gold, negative; Wassermann, negative,—both spinal fluid and blood. Though the symptoms indicated a spinal tumor, no operation was performed, partly through refusal of the mother to allow it, and partly

because of the patient's mental condition and the presence of bed-sores. A necropsy revealed a tumor, extramedullary and subdural, lying on the right side of the cord, and extending far enough vertically to involve about three segments. The tumor is probably a sarcoma, though the microscopic examination has not yet been completed.

CASE 2.—Tumor of the brain. The patient was a man twenty-nine years of age and single. Twenty years ago he developed tuberculous myelitis, which healed after a long period of time. In the spring of 1916 he began to stagger in his gait, and his feet would catch in walking. In the fall of 1917 he had occasional attacks of vomiting accompanied by headache. Six weeks ago he developed more severe headaches, and his vomiting became projectile in character; there were diminution of vision, choked discs, and marked asthenia and ataxia of the right upper and lower extremities. A tumor of the right cerebellum was thought probable, and the patient was operated on. He died shortly afterward. Only a part of the brain was removed at autopsy. It showed a cyst extending well down into the cerebellar hemisphere.

CASE 3.—Tumor of the brain. The patient was a boy nine years of age. In May, 1917, he began to have headaches, and was troubled with vomiting, constipation, epigastric pain, and fever. For a month he was confined to his bed, and was unable to walk or keep his food down. He afterward recovered, and seemed entirely normal until last December, when he received a blow on the head. There was no unconsciousness or dizziness following the blow, but his parents state that he became worse soon afterward. Of late he has vomited considerably, has lost weight, and has become too weak to walk. The following clinical signs were found upon examination: Pupils, normal; lateral nystagmus with slow component to the right; a watch was heard in the right ear at five inches, and in the left at fifteen inches; the heart-rate was slowed; von Pirquet test was negative; and there was no other evidence of tuberculosis. Examination of the spinal fluid resulted as follows: The Nonne, cell count, colloidal gold, and Wassermann tests were all negative.

A diagnosis of tumor of the right cerebellar hemisphere was made, but within a few hours of the examination the child developed convulsions and died. At the post-mortem examination a large tumor was found protruding from the outer surface of the right cerebellar hemisphere. The tumor is probably a glioma, since toward its center is found a cavity such as commonly occurs in the center of a gliomatous tumor in this region.

Dr. J. M. Armstrong allowed the members to handle and study a petrified bone, said to be the radius of some extinct animal. Apparently, some sort of injury had been sustained before the creature died, but inasmuch as this occurred, Dr. Armstrong said, fifteen or twenty millions of years ago, it was hard to decide just what the lesion might have been.

Drs. Ramsey, Farr, Benjamin, Cross, and others contributed from one to five cases each, many of which will be reported in detail later.

Altogether, the meeting was interesting and profitable. There were twenty-four members present.

FRED ELMER LEAVITT, M. D.,

Secretary.

BOOK NOTICES

THE PRACTICAL MEDICINE SERIES. Comprising Ten Volumes of the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University, Medical School. Volume VI, General Medicine. Edited by Frank Billings, M. S., M. D., head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, assisted by Burrell O. Raulston, A. B., M. D., Resident Pathologist, Presbyterian Hospital. Series 1917. The Year Book Publishers, 1917, pp. 347. Price of the Series of ten volumes, \$10.00.

This volume of the Practical Medicine series covers infectious diseases and diseases of the gastro-intestinal tract. Considerable space is given to the use of foreign proteins in the treatment of arthritis and other infections and the prophylactic and therapeutic use of vaccines in typhoid fever. Previous observations on the existence of amebic dysentery in the Northwest are confirmed, and should warn physicians to look for *entameba histolytica* in every case of chronic diarrhea.

The chapter on "Diseases of the Gastro-Intestinal Tract" gives a splendid review of all articles of any importance, but does not reveal any material progress during the past year.

—SCHAAF.

NEWS ITEMS

Dr. Julia J. Keats has moved from Almont, N. D., to Harvey, N. D.

Dr. A. S. Nicholson has moved from Max, N. D., to Williston, N. D.

Dr. E. W. Gaag, who formerly practiced at Bricelyn, has located at Villard.

The South Dakota State Medical Association meets in Mitchell on May 21-23.

Dr. H. E. LeCates, of New York, is in charge of the Sand Beach Sanitarium at Detroit.

Dr. Edgar F. Green, of the State Reformatory, at St. Cloud, died on April 23, at the age of 43.

Dr. W. E. Patterson, of Currie, has accepted a position on the staff of the Rood Hospital at Hibbing.

The annual meeting of the graduate nurses of Montana was held at Bozeman on April 24 and 25.

Nine nurses graduated from Bethesda Hospital of St. Paul last month in the 1918 graduating class.

The U. S. Civil Service Commission again asks us to emphasize the government's need for stenographers at Washington.

The Medical Clinic of the Hennepin County

Medical Society, which proved so great a success last month, will be an annual affair.

Dr. A. V. Fankboner, who has practiced a number of years in Idaho, has become associated with Dr. J. A. Thabes, of Brainerd.

The nurses of Hill Crest Hospital, of Minneapolis, have become foster parents of two French children whose fathers died in the war.

Dr. C. F. Ausman, of Bellingham, will move to Paynesville to care for the practice of Dr. H. W. Arndt, who has been called to the service.

Capt. Harry J. O'Brien, of Watertown, S. D., died last month at the age of 49. Capt. O'Brien died of pneumonia while on duty at Fort Snelling.

The statement, made in our last issue, that Dr. E. B. Johnston would move from Benson to Montevideo, was incorrect. Dr. Johnston will remain in Benson.

According to a list of St. Paul physicians in the Medical Reserve Corps compiled by the Ramsey County Medical Society, the number of such men was 46 last month.

North Dakota had a clean-up period from April 5 to April 20, when an effort was made all over the state to clean up all waste material that harbors disease germs.

Dr. Edith Van Dyke, an assistant physician at the Minnesota State School for Feeble-minded at Faribault, died last month after two days' sickness with pneumonia.

St. Paul women are raising funds to send women physicians abroad for service among the civilians in the war territory. There is great need for such professional help.

The City Hospital (not a municipal institution) of Stillwater was run with a small deficit last year. The high cost of material and wages has been hard on all hospitals.

Dr. G. Leslie Hill, who has been practicing at Watertown, S. D., for fourteen years, has moved to Sioux Falls, S. D., to continue in his specialty of eye, ear, nose, and throat work.

Miss Adda Eldridge, of Rochester, N. Y., interstate secretary of the American Nurses' Association, has been in Minnesota delivering addresses before nurses' gatherings.

Dr. G. H. Gulbrandsen, of Canton, S. D., has moved to Brookings and become associated with Dr. B. F. Green in general and surgical practice under the firm name of Drs. Green and Gulbrandsen.

Capt. A. W. Guest, of Jamestown, N. D., who was recently discharged from the M. R. C. on account of physical disability, will locate at

Fargo, N. D., to follow his specialty in mental diseases.

Last week's call for 150,000 new men to gather at army cantonments means 3,513 from Minnesota; 1,302 from Montana; 1,037 from North Dakota; and 720 from South Dakota. They will, of course, require more doctors.

Dr. John W. Freeman, of Lead, S. D., has resigned from the staff of the Homestake Hospital. The Black Hills Medical Society presented Dr. Freeman a bronze loving-cup, and made him an honorary life member of the Society.

The Minnesota State Board of Health now recommends thorough house-cleaning in the place of fumigation for rooms that have been occupied by persons with contagious diseases. The rule compelling fumigation has been abolished.

In the percentage of physicians contributed to the Medical Reserve Corps to the whole number in the state, Nevada stands at the head of the states, having contributed 37 out of 154 in the state, or 18.2 per cent. Minnesota stands seventh in the list.

Dr. Justus Ohage, the long-time and efficient health officer of St. Paul, has resigned his position to avoid further discussion of his loyalty, which he declares to be sincere. Dr. G. A. Renz, deputy health officer, was appointed to take Dr. Ohage's place.

Surgeon-General Gorgas says 5,000 more medical men are needed in the army, in addition to the 16,000 medical officers now in training or ordered abroad. Men between the ages of 25 and 45 are especially desired, but men up to 55 will be accepted.

The annual Alpha Omega Alpha address will be given in the Anatomy building amphitheatre at the University of Minnesota on Friday, May 24, at 8 p. m. The speaker will be Dr. Charles Lyman Greene, of St. Paul. His subject is "The Heart of the Soldier."

The absence of Dr. Crawford, who is in the Medical Reserve Corps, made it difficult to continue the work of the Chamberlain (S. D.) Sanitarium of which he was medical director. It will be conducted as an open hospital and sanitarium during the continuance of the war.

The number of deaths from pneumonia in Minneapolis in one week of last month was 64, the largest number ever recorded in the city in that length of time. The number of contagious diseases in St. Paul and Minneapolis in April was never so great in the history of the two cities.

Dr. A. N. Bessessen, of Minneapolis, has de-

vised a self-filling hypodermic syringe for use in producing local anesthesia. The refilling is done from a container attached to the syringe. The apparatus was described and illustrated in the *Journal of the American Medical Association* of April 20.

Dr. H. J. Thornby, of Barnesville, being the only physician in the place, two other men having gone into the M. R. C., has issued a card requesting all obstetrical patients to use the hospital, when possible, as he has not the time to visit them in the country. Special rates are made in order to conserve his time.

Dr. C. D. Whipple, of Minneapolis, has been convicted of selling narcotic drugs to habitual users of habit-forming drugs. The judge held the word "prescribe," as used in the law, to mean to write a prescription to be filled by a pharmacist. Dr. Whipple was sentenced to one year's imprisonment and payment of a fine of \$500.

The division of venereal diseases of the Minnesota State Board of Health has offices in Room 309 in the State Capitol. Dr. H. G. Irvine, of Minneapolis, is in charge of the division, and will spend a part of each day in the office. Dr. Irvine recently returned from California, where he has been engaged in like work for several months.

Fourteen positive cases of trachoma were found in Itasca County last month in the schools where children were examined by a visiting nurse. In one district visited by the nurse 227 out of 282 children examined were found with physical defects. Dr. W. P. Greene, of the State Board of Health, will make a survey of the counties in which trachoma exists.

On April 14, the Adjutant-General of the U. S. Army at Washington, telegraphed Mrs. E. J. Abbott, of St. Paul, mother of Lieut. John S. Abbott, who entered the British Medical Service last year and had been on the French fighting front ever since, as missing since March 24th, three days after the German drive began. Up to the present time nothing further has been heard about him, and it is feared that he was either made prisoner or was killed in action.

Four brothers who are physicians met in Minneapolis during Clinic Week. Here are their names, locations, and years in practice: Dr. F. A. Seeman, Sioux City, Iowa, 23 years in practice; Dr. H. J. Seeman, Rockham, S. D., 20 years in practice; Dr. C. A. Seeman, Tulare, S. D., 16 years in practice; and Dr. W. O. Seeman, Eau Claire, Wis., 18 years in practice. Lyons, Iowa,

is the home of this remarkable quartet, and four medical schools gave them medical training.

The Lake Preston District Medical Society of South Dakota met last month at Lake Preston, with the following program: "Medical Practice in Asia," by Dr. W. E. Daniels; "Some Phases of the Medical Clinics in Europe," by Dr. H. H. Fruenfeld; "Medical Practice in Mexico," by Dr. G. J. Long; "Points of Interest of Several European Clinics," by Dr. J. O. Lee; "Pediatrics in Foreign Clinics," by Dr. E. B. Taylor; "European Clinics Before the War," by Dr. Benj. Thomas.

Lieut. T. H. Sweetser, son of Dr. H. B. Sweetser, of Minneapolis, has been recommended for the British war cross for bravery and devotion to duty. Lieut. Sweetser is with the British medical corps near Passchendaele, and when the battalion headquarters were struck by a gas shell, and many men were in a serious condition, he attended forty cases, although severely affected himself by gas. Lieut. Sweetser graduated from the New York College of Physicians and Surgeons last year, and at once entered the M. R. C.

The U. S. Army Recruiting Station in Minneapolis asserts officially, and desires the information given out, that, regardless of all previous reports to the contrary, members of the Second Minnesota Field Artillery who are not of draft age, can now enlist in any branch of the military service. Every officer or enlisted member of the organization can obtain a written discharge upon application to the Adjutant General of the State, relieving him of all obligations under the oath of enlistment. Those within the selective draft will be subject to draft regulations.

AN IMPORTANT WAR MEETING OF PHYSICIANS

The Committee of National Defense at Washington has instructed Major Henry D. Jump to hold a meeting on the evening of Saturday, May 18th, at eight o'clock in the Gold Room of the Radisson Hotel, Minneapolis, Minnesota. This meeting is for the purpose of getting all the physicians possible in Minnesota to join the Medical Reserve Corps. All physicians up to fifty-five years of age are eligible. The need of physicians for the Medical Reserve Corps is very urgent. Five thousand physicians are needed for the Army and one thousand for the Navy. All those of proper age will probably receive commissions. Those who are incapacitated for active duty in any manner will undoubtedly be given some service in assisting our Government in this great emergency.

The wives, mothers, sisters, and friends of the physicians, as well as the public, are requested to be present at this meeting as it will be purely a patriotic affair.

It is hoped to have the Governor of the State present, either to preside or to speak, and other prominent men will take part.

It is also hoped that every physician in the state will respond promptly, and thus show his patriotism and his enthusiasm in attempting to rid the world of the horrible menace that confronts it.

Details of the meeting will appear in our next issue.

RECENT NEW ASSIGNMENTS OF NORTH-WESTERN MEDICAL OFFICERS

Minnesota—

To Fort Riley, Kan.: Capt. F. S. Warren, Faribault; Capts. S. H. Baxter and L. L. TenBroeck, Minneapolis; Capt. J. C. Ferguson, St. Paul; Lt. Charles Gernio, Balaton; Lt. A. W. Swedenburg, Cannon Falls; Lt. Alphonse Cyr, Barnesville; Lt. Frederick Barrett, Gilbert; Lt. M. E. Withrow, International Falls; Lt. W. H. Phillips, Jordan; Lt. D. W. McDougald, Le Sueur; Lt. E. A. Rumreich, Mahanomen; Lt. Joseph Stomel, Minneapolis; Lt. G. E. McCann, Nevis; Lt. E. W. Cowern, North St. Paul; Lt. A. F. Strickler, Sleepy Eye; Lts. Edward Schons, H. I. Twiss, and W. H. Von der Weyer, St. Paul; Lt. W. C. Schiele, Virginia; Lt. Baldwin Borreson, Warren; Lt. H. B. Weinburgh, Waterville.

To Camp Grant, Ill.: Lt. A. I. Arneson, Emmons.

To Camp Travis, Texas: Lt. M. W. Wheeler, Glencoe.

North Dakota—

To Camp Gordon, Ga.: Capt. H. H. Healy, Grand Forks.

To Fort Riley, Kan.: Lt. G. S. Frogner, Parshall.

Montana—

To Camp Lewis, Wash.: Major LeRoy Southmayd, Great Falls.

To Fort Riley, Kan.: Lt. L. K. Gibson, Bozeman; Capt. E. A. Johnson, Helena.

To Camp Zachary Taylor, Ky.: Lt. C. V. Reel, Three Forks.

South Dakota—

To Fort Riley, Kan.: Capt. W. M. Hunt, Murdo; Lt. J. W. Foster, Aurora.

To Camp Kelly, Texas: Lt. Port McWhorter, Miller.

Transfers

Lt. Joseph Moses, Jr., Adams, Minn., from Fort Sam Houston, Texas, to Fort Riley, Kan.

Lt. J. A. Saari, Eveleth, Minn., from Fort Riley, Kan., to Chicago.

Lt. A. E. Mark, Rochester, Minn., from Army Medical School to Camp Custer, Mich.

Lt. H. L. Goss, Minneapolis, from Fort Riley, Kan., to Camp Pike, Ark.

Lt. J. H. Cosgrove, Duluth, from Fort Riley, Kan., to Camp Travis, Texas.

Capt. R. H. Monihan, International Falls, Minn., from Fort Oglethorpe, Ga., to Fort Meyer, Va.

Lt. V. H. Moats, Minneapolis, from Camp Logan, Texas, to Fort Riley, Kan.

Lt. R. C. Rowe, Fairmont, Minn., from Fort Riley, Kan., to Mineola, N. Y.

Capt. R. T. Knight, Minneapolis, from Camp Crane, Pa., to Williamsbridge, N. Y.

Capt. J. H. Kirkham, Langdon, N. D., from Fort Riley, Kan., to Camp Cody, N. M.

Capt. G. A. Carpenter, Fargo, N. D., from Fort Riley, Kan., to Rockefeller Institute, New York City.

Lt. J. D. Edgar, Henry, S. D., from Fort Riley, Kan., to Camp Travis, Texas.

Lt. J. G. Carney, Parkston, S. D., from Fort Riley, Kan., to Houston, Texas.

Honorably Discharged

Lt. W. W. Nauth, Minneiska, Minn.

Lt. A. B. Butler, Minneapolis.

Lt. A. E. Mark, St. Paul.

Lt. Frank Lackner, Musselshell, Mont.

Capt. A. W. Guest, Jamestown, N. D.

Capt. D. J. Carson, Faulkton, S. D.

PHYSICIAN WANTED

Physician for services in hospital, largely surgical. Salary, \$1,500 a year and maintenance. State personal and professional qualifications in first letter. Address 129, care of this office.

LOCUM TENENCY WANTED

Locum tenens work for from three to twelve months by Class A graduate. Twenty-nine years old. Married. Two years' hospital and general experience. Address 131, care of this office.

OFFICE FOR RENT

Three hundred square feet of office room in the Physicians' and Surgeons' Building, Minneapolis. Common reception-room with a surgeon and two dentists. Address 132, care of this office.

ASSISTANT WANTED

An assistant is wanted by a physician with a large surgical and general practice in a town of 4,000 in the Park Region district of Minnesota; married man preferred. Good opportunity for special work in x-ray and general laboratory technic. Good salary. Address 130, care of this office.

DOCTOR WANTED

As business manager and house doctor co-operating with expert medical specialists' staff. Attractive central location and pleasant home. No night work. Limited outside practice permitted. Geniality as well as capability required. Write or apply to Loring Park Sanatorium for Diabetes, 1508 Harmon Place, Minneapolis, Minnesota.

PHYSICIAN WANTED

Physician wanted for a general country practice which will run \$5,000 per year collectible. Must be an American and alive. Good town in northern North Dakota. Best kind of support will be given a good man. Nothing to buy. Good schools. Address 123, care of this office.

OFFICE GIRL WANTED BY A MINNEAPOLIS SPECIALIST

An experienced office girl of good address with a fair knowledge of stenography is wanted. An excellent opening for the right girl. Might consider one without experience. Address 120, care of this office.

PHYSICIAN'S HOUSE FOR SALE IN MINNEAPOLIS

If you want to come to the city and locate at once in a house that will be worth one thousand dollars a year to you because of its location, see my house. Modern in every way, and a bargain. Address 126, care of this office.

PHYSICIAN WANTED

A competent physician is wanted in a good farming community in northwestern Minnesota. Scandinavian preferred. The village has always had a good doctor; those who have located here soon accumulated a few thousand dollars, and then left for a larger city. Address 121, care of this office.

PHYSICIAN WANTED

A young physician can find a fine opportunity by investigating this proposition: a town of 2,200 and only one doctor; prosperous community; good collections; excellent territory to draw from. A physician can step into a lucrative practice that has no strings attached to it. Write, wire, or come and investigate at once. Address 119, care of this office.

A MEDICAL ASSISTANT

A large medical and surgical firm in one of the best cities (15,000 inhabitants) of the Northwest wants a man of special training and experience to take over medical part of the work. A good salary and an interest in the business will be given to the right man. Address 127, care of this office, and give a full account of yourself.

PARTNERSHIP WANTED

Physician of ten years' successful practice desires association with physician or surgeon in city of 4,000 or more where there is opportunity for permanent practice; American, Protestant, aged 36; Minnesota license; reciprocity; just completing twelve-month postgraduate course surgery and urology; proposition must be strictly ethical and bear investigation; references exchanged. Address 116, care of this office.

LOCATION WANTED IN ONE OF THE TWIN CITIES

I desire a locum tenency, assistantship, association with good combination, or will purchase partnership in either of the Twin Cities. I am an American, married, aged 40, graduated 1898, 20 years' experience, extensive study in Europe, speak three languages, always had large practice and doing referred surgical work at present, high-grade work in surgery and medicine. Best of references and wide acquaintance in Twin Cities. Will make personal visit at once to look proposition over, and acquaint you with my personality and ability. Licensed in Minnesota and several other states. Honorably discharged from military service. Address 128, care of this office.

In the Treatment of
RHEUMATIC and
NEURALGIC ILLS
you will obtain substantial aid from the thorough use of
K-Y ANALGESIC

This non-greasy, water-soluble local anodyne will enable you to ease your patient's pain and discomfort, while your internal or systemic medication is combating the cause of his condition.

The advantages, moreover, of relieving the pain of a facial neuralgia, an inflamed joint, or aching lumbar muscles without recourse to coal tar derivatives cannot fail to appeal to medical men.

K-Y ANALGESIC is a safe and effective adjunct that will daily grow more useful to the practitioner as the many opportunities for its effective use are realized.

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT

15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

So many cases of
Pruritus, Chafings,
and Irritations

are relieved by applying

K-Y Lubricating Jelly

that we feel we owe it to our patrons to direct their attention to the usefulness of this product as a local application, *as well as* for surgical lubrication.

No claim is made that K-Y Lubricating Jelly will act with equal efficiency in every case; but you will secure such excellent results in the majority of instances that we believe you will continue its use as a matter of course.

NO GREASE TO SOIL THE CLOTHING!

Collapsible tubes, 25c. Samples on request.

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT

15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Hand
Disinfection

can be easily and
conveniently accomplished by the
use of

SYNOL SOAP

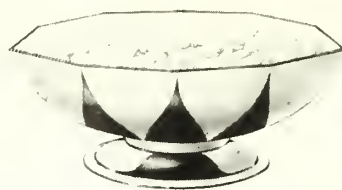
This efficient liquid soap enables the physician and surgeon to cleanse and disinfect the hands with gratifying freedom from the irritating effects of caustic soaps and antiseptics. It is particularly serviceable to those who have to cleanse the hands many times each day. Invaluable in the office, operating room and sick chamber.

**ANTISEPTIC—
CLEANSING—
DEODORANT**

Johnson & Johnson

New Brunswick, N. J.

U. S. A.



Whole Grain Bubbles

Every Food Cell Blasted

Puffed Grains are made by Prof. Anderson's process, to accomplish the acme of easy digestion.

Puffed Rice and Wheat are whole grains puffed to eight times normal size. Corn Puffs are pellets of hominy puffed to raindrop size.

They are puffed by steam explosion, by being shot from guns. The steam is created by subjecting the grains to an hour of fearful heat.

Thus the trifle of moisture inside each food cell is changed to super-heated steam. When the guns are shot these cells explode. A hundred million steam explosions occur in every kernel.

**Puffed
Rice**

**Corn
Puffs**

**Puffed
Wheat**

Each 15c Except in Far West

These grains are fitted for digestion as grains never were before.

They appear as toasted bubbles, flavory, flimsy, porous. They are fascinating dainties. And they are cooked thrice better than the average grain food.

In many a case you will, we think, consider such foods advisable.

PUBLISHER'S DEPARTMENT

ASPIRIN (BAYER)

One may rail, and sometimes justly rail, against the high prices charged for patented or specially named articles protected by trademarks; but there is another side of the subject well worth considering. A high-priced *pure* article is infinitely preferable to a *low-priced impure* or adulterated article, especially in the case of such drugs as aspirin. Until manufacturers and druggists are made by rigidly enforced drastic laws to quit adulteration and substitution, the high-priced *pure* article will be desirable.

If our patent law gave the discoverers and manufacturers of aspirin undue, or even exorbitant, profits, the laws are at fault, not the men who worked under them, any more than the men who gave us the electric light, the telephone, and all such inventions.

If doctors will not root up the substitution of druggists, the people will call for the patented article which sells under conditions making its adulteration *unprofitable*, which cures the evil.

THE IDEAL SALINE ELIMINANT

Being a saline mineral water, rich in sulphates, Pluto water acts in the intestines by its osmotic effect. The action is a double one. The salts contained in the water are slowly diffusing, therefore capable of holding and increasing the fluid contents of the bowels.

It has been shown that not only is the volume of water increased but that, by reflex action of the intestinal glands, the internal secretion—succus entericus—is also increased.

The absence of griping from Pluto water is due to the fact that it acts as an intestinal bath rather than as an irritant of the mucosa, as characteristic of most cathartics and even calomel. The advantages of this kind of elimination are apparent, especially so when the continued use of laxatives becomes necessary.

In all cases where a prompt, efficient and harmless hydragogue laxative or cathartic is indicated, Pluto water is the one ideal eliminant.

THE FAIRVIEW HOSPITAL OF MINNEAPOLIS

Few hospitals occupy a more nearly ideal location than does Fairview. It is located on the Mississippi River bank in the city of Minneapolis, with a view of a mile or more of water and wooded bluffs that have attracted the attention of travelers from all parts of the world.

The building was erected in 1915, and opened in 1916, with an equipment that surgeons say is complete in every respect; and its personnel was chosen to make the institution worthy of its ideals of service.

Its rates are even too low for the services rendered, but its managers say they will be maintained as long as possible.

A very successful training-school is maintained; and the well-patronized maternity department gives the students of the school ample opportunity for training in this line of work.

Visiting physicians are always welcome.

A SAFE ANTISEPTIC

In view of the numerous reports of death and disaster following the use of bichloride of mercury and carbolic acid, it is good thing to know that there is now available a germicidal agent which is even more efficient than these dangerous antiseptics, and which is safe. The medical profession owes much to the genius of Dr. H. D. Dakin, who has recently brought to its attention the great value of the chlorine-carrying compounds.

The most convenient of the antiseptics which he has introduced is para-toluene-sodium-sulphochloramide, best known in this country under the name of "Chlorazene." In Dakin and Dunham's "Handbook of Antiseptics," we learn that this antiseptic is more powerful, when tested on blood-serum-muscle-extract cultures of the staphylococcus aureus, than mercuric chloride, silver nitrate, argyrol, zinc chloride, hydrogen peroxide, phenol, and other common antiseptics. In fact, a 2-per cent solution of this antiseptic will accomplish in five minutes what it requires 24 hours to accomplish with a 1:1000 solution of mercuric chloride.

The most gratifying fact of all is that the Chlorazene is safe. There is little or no danger of poisoning. Some of the uses of Chlorazene are as follows:

In all forms of sore throat, as a spray; and as a therapeutic and prophylactic agent in diphtheria, meningitis, measles, scarlet fever, tonsillitis, etc.

In skin diseases, such as eczema, acne, carbuncles, boils, paronychia, felons, and other common skin infections.

In wounds Chlorazene may be used as a wash to infected areas, as an irrigant, on compresses, as a dusting powder (Chlorazene Surgical Powder), and as a paste (Chlorazene Surgical Cream).

In genito-urinary diseases, as an application to venereal sores (chancre and chancroid), as an injection in the treatment of gonorrheal urethritis and gonorrheal vaginitis.

In obstetrics, following delivery and to clean out the uterus in cases of sepsis. As a cleansing agent and deodorant in practically all diseases of women.

In cancer and malignant sores as a deodorant and germicide.

Samples of Chlorazene will be sent without charge to any physician, dentist, veterinarian, or druggist in any part of the country applying to the home office of The Abbott Laboratories, Chicago. Complete literature of Chlorazene, Dichloramine-T, Chlorococane, and other Dakin preparations, will be included.

A NEW OBSTETRICAL ANESTHETIZER

The Heidbrink Company, manufacturer of nitrous oxid-oxygen-ether anesthetizing apparatus, announces its latest invention, which is invaluable in the obstetrical field. It is an Automatic Obstetrical Attachment for its anesthetizing apparatus, designed to minimize gas-consumption, to supply instantly a volume of the anesthetic mixture without respiratory effort, and, by its automatic operation, to permit the attending physician to concentrate his attention almost entirely upon the patient, the attachment quickly demonstrated its value and has received the hearty endorsement of prominent obstetricians.

Employing the Automatic Obstetrical Attachment

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones. After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

155-7 N. Michigan Blvd. - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aëroaerobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

**Wassermann Test, Blood or
Spinal Fluid \$5.00**

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.

5 S. Wabash Ave.

ST. LOUIS, MO.

4485 Olive St.—Corner Taylor

NEW YORK, N. Y.

18 E. 41st St.

the physician, after setting the anesthetizer to deliver an analgesic dosage, controls the apparatus entirely by operating a self-closing valve on the face-inhaler. Thumb pressure opens the valve and administers the gas instantaneously. It automatically closes when the thumb-pressure is released, shutting off the gas-flow at the inhaler, where it is ready again for instantaneous administration without respiratory effort. By such simple control self-administration of analgesia may be taught the patient most easily, and the physician may concentrate his attention entirely on the patient until such time as anesthesia is required. The self-closing valve prevents gas wastage.

The anesthetizer is controlled by the obstetrical attachment, which is an automatic device placed in the small re-breathing bag of the Heidbrink gas apparatus. After the flow of the anesthetic mixture is shut off at the face-inhaler, this device performs the function of first allowing the re-breathing bag to fill with fresh gas, then it shuts off the anesthetizer. When the face-inhaler valve is opened, gas is supplied instantly and continuously until the valve is again closed. The obstetrical attachment then functions again as before.

The obstetrical attachment interferes in no way with the ordinary method of producing analgesia or anesthesia. Provision has been made in the construction of the face-inhaler valve for holding it open. The attachment does not function unless the face-inhaler valve is closed.

The manufacturer stated that the Automatic Obstetrical Attachment is operative on any Heidbrink Anesthetizer.

Noyes Bros. & Cutler, St. Paul and Minneapolis, are the Northwestern distributing agents.

SINUSOIDAL APPARATUS

Many prominent physicians in this country who have investigated all forms of sinusoidal apparatus have adopted the Ultima No. 3 Sinustat especially for their outside use, many preferring it for office work as well. The physician interested in electrical equipment will do well to communicate with the manufacturers and receive the very liberal trial proposition they are offering this month. Address a post-card to the Ultima Physical Appliance Company, 136 W. Lake St., Chicago, Ill., and a Chart of Sinusoidology worth \$1.00, as well as a comprehensive booklet of clinical data, will be mailed free as long as the supply lasts.

HEADACHE AND NEURALGIA

Is there anything more harmlessly comforting in these painful conditions than K-Y Analgesic locally applied? "Sick headache," "bilious headache," "nervous headache," and just "plain headache" are usually relieved when K-Y Analgesic is properly employed.

The local use of K-Y Analgesic does not in the least take the place of, or interfere with, any treatment looking to the removal of the cause of the headache. Rather, K-Y Analgesic is simply a useful adjunct to general treatment.

K-Y Analgesic is not a panacea—it is simply a safe, non-greasy, local anodyne, remarkably effective within its rational limitations.

Samples will be forwarded to physicians on request to Johnson & Johnson, Van Horn and Sawtell Dept., 15-17 East 40th St., New York City.

THE RICE MATERNITY HOME, FARGO, N. D.

The properly conducted maternity home is an indispensable institution in this age, but the improperly conducted one is an abomination which cannot be too severely condemned. The Rice Maternity Home at Fargo, N. D., is, we believe, beyond criticism in its methods. It is supervised by a physician, and is open to all physicians. It has twelve rooms for patients, and a delivery room, with all facilities required in a high-grade hospital of this character.

Mrs. H. Rice is the superintendent and she will cheerfully give physicians any desired information concerning the institution.

USED X-RAY, ELECTRO-THERAPEUTIC, AND OTHER APPARATUS AT BARGAIN PRICES

The Victor Electric Corporation offers about thirty used x-ray and electro-therapeutic appliances at prices that are very attractive; and one may buy of this company with the assurance that what he buys is in the exact condition represented and that the price is really low, as well as fair.

The list of this apparatus appears in another column, and our readers may be certain that it will not be on the market long.

For information address the Minneapolis Sales Office, La Salle Building.

Use Vaccines in Acute Infections

The early administration of Sherman's Bacterial Vaccines will reduce the average course of acute infections like Pneumonia, Broncho-pneumonia, Sepsis, Erysipelas, Mastoiditis, Rheumatic Fever, Colds, Bronchitis, etc., to less than one-third the usual course of such infectious diseases, with a proportionate reduction of the mortality rate.

Sherman's Bacterial Vaccines are prepared in our specially constructed Laboratories, devoted exclusively to the manufacture of these preparations and are marketed in standardized suspensions.

Write for Literature.



G.H. SHERMAN, M.D.
Detroit, Mich.
U.S.A.

A Tonic with Food Value

You will find in Malt-Nutrinevaluable tonic properties due to the aromatic bitter principles of Saazer hops. You will also find the **food** value of more than 14 per cent. of pure malt extract. The ingredients of Malt-Nutrine are carefully and properly chosen to constitute a real food-tonic and are combined through scientific processes under the direction of competent chemists.



ANHEUSER-BUSCH'S
Malt-Nutrine
TRADE MARK.

is the recognized standard of medicinal malt preparations. It is extensively prescribed by physicians as a food-tonic for nursing mothers, protracted convalescence from acute diseases, insomnia and many other conditions. Do **not** confuse it with cheap dark beers.

Pronounced by the U. S. Internal
Revenue Department a

PURE MALT PRODUCT

and not an alcoholic beverage.

ANHEUSER-BUSCH,

St. Louis

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, MAY 15, 1918

No. 10

REPORTS OF CLINICS GIVEN DURING MINNEAPOLIS CLINIC WEEK—APRIL 8-12, 1918

IN TWO PARTS—PART I

Minneapolis Clinic Week proved of greater interest, and attracted a larger attendance, than had been expected by the members of the Clinical Section of the Hennepin County Medical Society, which instituted this Clinic Week. It appealed to the members of the medical profession of the Northwest because of the abundance and diversity of the clinical material presented.

Since medical practice has been divided into definite specialties, the distinctive feature of Clinic Week was the large amount of work done in all departments, affording an opportunity for visiting physicians to select diagnostic and clinical work in which they were particularly interested.

The Week demonstrated that Minneapolis, with her fourteen hospitals, totaling twenty-three hundred beds, is a medical center.

The afternoon sessions, held in the Gold Room of the Radisson Hotel, proved especially popular and instructive. During these hours, several moving-picture films, illustrating the surgical work of a number of American and foreign clinicians, were exhibited. Local physicians and surgeons, whose research work has added much of value to medical literature, also gave illustrated lectures and demonstrations during these sessions.

Two evening sessions were held. On that of April 8, the annual banquet of the Hennepin County Medical Society was held. At this dinner Dr. William Sharpe, of New York City, delivered a most interesting and illuminating ad-

dress, which is published above; and he gave moving-picture illustrations of the technic of a subtemporal decompression operation. A second evening session, on April 10, was held in the Gold Room of the Radisson Hotel when several moving-picture films were exhibited, and Dr. Lewis Fisher, of Philadelphia, delivered an address on the "Static Labyrinth." Dr. Fisher pointed out the great value of the newer ear-tests in determining the diagnosis of brain lesions.

The scope of the diagnostic and clinical work done during the week made it truly a polyclinic affair. The chief aim of those who participated in the program was to impart modern methods of visualizing and combating diseases.

The Week proved of benefit to visiting physicians, as well as to the clinicians of Minneapolis. It will make for better teachers, better clinicians, better hospitals, and, as a result, improved methods of diagnosis and treatment.

The success of the first Minneapolis Clinic Week reflects credit on endeavors of the several committees who had charge of the program and arrangements. The large attendance showed that the medical profession of the Northwest is a progressive one and that Clinic Week offered opportunities for which its members had been seeking.

The reports that follow cover only a part of the work done, and further reports will appear in our next issue.

A word of explanation concerning the varying

lengths of the reports may not be out of place. The editor of THE JOURNAL-LANCET, in asking for the reports on behalf of the Executive Committee, of which he was a member, was perhaps not sufficiently specific in his statements of what was desired, and, indeed, he had no specific idea on the subject. This left the doctors in doubt as to how much to write on each clinic, and, naturally, the reports vary.

Dr. William Sharpe's paper, read at the banquet, will appear in our next issue.

GENERAL SESSIONS

DR. A. S. HAMILTON

Nervous and mental diseases.

On April 8, 1918, at the general session Dr. Hamilton showed a series of lantern slides illustrating a large variety of brain tumors and gave some remarks as to their pathology and clinical features.

ABBOTT HOSPITAL

DR. W. A. ABBOTT

1. Pelvic abscess treated by post-vaginal section and drainage.

2. Large inguinal hernia with incarceration and adhesion of about one-third of the omentum. Operation: herniotomy with excision of omental mass. Cystic tumors of the breast. Removal. Submammary approach.

3. Cystic tumors of the breast. Removal. Submammary approach.

4. Pelvic abscess. Posterior vaginal section and drainage.

5. Papilloma of shoulder. Operation: removal under local anesthesia.

6. Large vaginal chronic ulcer. Operation: complete removal by dissection.

7. Intussusception. Ileocecal. Treatment by abdominal section and expression.

DR. R. A. CAMPBELL

Intussusception, ileocecal. Treatment by abdominal section and expression. Tonsillectomy.

DR. A. C. STRACHAUER

Separation of upper epiphysis of humerus, by reduction under anesthesia. Large vaginal chronic ulcer. Operation: complete removal by dissection.

DR. F. C. RODDA

Clinical X-Ray Work in Children—

Dr. Rodda showed plates of lung condition such as pneumonia, empyema, pyopneumothorax, and miliary tuberculosis, with attempts to differentiate the pictures obtained in these conditions: plates of heart lesions, congenital and acquired; plates of the bones, showing delayed ossification as a help to diagnose hypothyroidism; and plates showing the change of rickets and lues.

ASBURY HOSPITAL

DR. C. D. HARRINGTON

Röntgenology.

Demonstrations of chest-plates.

Röntgenoscopic clinic with a barium meal.

Cancer of stomach.

Gastro-enterostomy.

Prolapsed colon.

Colitis.

Tubercular hip.

Tuberculosis of the lungs.

Demonstration plates of fractures.

DR. H. H. LEAVITT

CASE 1.—Mrs. F. N., aged 55. The patient has tonsillitis two or three times every winter; complains of pain in left shoulder and in back of neck; has throbbing in the ears and palpitation of the heart. Examination showed chronic hypertrophic tonsillitis, with pus and cheesy material exuding from the left tonsil on pressure. Tonsillectomy done under local anesthesia. Technic consists of swabbing the tonsils, uvula, and base of tongue with ten per cent cocaine solution to prevent retching. Novocaine solution was used for anesthesia (four injections of a drachm each in each tonsil). Fourteen c.c. of thromboplastine used hypodermically to bring up the coagulability of the blood. Operation consisted of a clean dissection with knife and scissors. There was no pain or hemorrhage.

CASE 2.—Mrs. J. S., also aged 55. Blood-pressure, 195. Patient complains of dizzy spells, ringing in the ears, and pain in right side and right leg. Inspection of tonsils shows chronic hypertrophic tonsillitis. Tonsils honeycombed.

Technic, same as in Case 1.

DR. C. P. NELSON

CASE 6.—Female, aged 53. Tumor in the left breast, which she had noticed for two months. It was about two inches in diameter, and freely movable, and not painful. Tumor removed under gas-ether anesthesia; a frozen section was immediately made, and pronounced a fibroid.

DR. ALBERT H. PARKS

Abdominal and Vaginal.—Girl, aged 22. Curettage; appendectomy; removal of one-half of right ovary (large cyst); shortening of round ligaments.

Appendectomy.—Man, aged 28. Subacute appendicitis with adhesions.

Abdominal and Vaginal.—Woman, aged 39; multipara. Curettage; perineorrhaphy, panhysterectomy, and appendectomy. Uterus undergoing fibroid changes and enlarged.

Abdominal and Vaginal.—Woman, aged 37; multipara. Curettage; perineorrhaphy, appendectomy; and suspension of uterus (modified Gilliam operation).

Inguinal Hernia.—Man aged 22. Left inguinal hernia, combined with hydrocele of the cord. Hernia repaired by Ferguson method; hydrocele sac resected and sutured over the testicle; circumcision; removal of adenoids.

Appendectomy.—Man, aged 29. Subacute appendix with calculi.

Varicocle and Tonsillectomy.—Man, aged 28, to prepare for army service. Veins resected by usual methods. Tonsils removed by blunt dissection and snare.

Herniotomy.—Man, aged 24. To prepare for army service. Left inguinal by usual Ferguson method.

DR. CLYDE UNDINE

Dr. Undine presented neoplasms of all types. The tumors were shown macroscopically and microscopically, and histories of the interesting cases were given.

Among the neoplasms demonstrated were the following:

Carcinomas of the prostate, stomach, breast, and uterus.

Epitheliomas of the lip.

Epulis.

Adenoma of the prostate and the thyroid.

Cystic and colloid goiters.

Leiomyoma and fibroid uteri.

Secondary carcinoma of lymph-glands.

Myomas.

DR. J. A. WATSON

CASE 1.—Mr. A., aged 33. Thirty degrees convergent strabismus. Partial tenotomy externus and advancement internus under local anesthesia.

CASE 2.—Miss H., aged 21. Esophoria eighteen degrees. Partial tenotomy of right internus, tucking operation right externus under local anesthesia.

CASE 3.—Lila M., aged 22. Chronic suppurative otitis media of five years' standing. Modified radical mastoid operation with preservation of drum and ossicles.

CASE 4.—Ida M., aged 20. Chronic suppurative otitis media of ten years' standing. Radical mastoid operation.

CASE 5.—Girl B., aged 6. Tonsillectomy by Sluder method with modified Brown's instrument under nitrous oxide and ether anesthesia.

CASE 6.—Boy B., aged 8. Tonsillectomy by Sluder method with modified Brown's instrument under nitrous oxide and ether anesthesia.

CASE 7.—Mr. A., aged 21. Tonsillectomy by Sluder method with modified Brown's instrument under nitrous oxide and ether anesthesia.

CITY HOSPITAL AND DISPENSARY

DR. F. L. ADAIR

1. Clinic in obstetrical and gynecologic diagnosis:

Three cases of retroversio uteri, demonstrating different methods of round-ligament suspension of the uterus.

2. Clinic in gynecologic surgery:

In one of these cases a bilateral salpingectomy was done; and the method of covering the raw surfaces with the round ligaments was demonstrated.

3. Clinic in obstetrics:

1. Demonstration of gas analgesia.

2. Demonstration of x-ray plates of pregnant women.

DR. JOHN GROSVENOR CROSS

Five cases of pneumonia, exhibiting consolidations of different lobes. The diagnosis of complications, particularly of empyema. One case is discovered to have purulent exudate in the pleura and transferred for drainage. Discussion of experience with lobar pneumonia at Minneapolis City Hospital. Treatment.

Ward round, showing cases of acute and chronic nephritis. Discussion of renal-competency tests, and their bearing upon prognosis.

General round of the hospital, including the laboratory and receiving-ward, with a view to explaining the system of handling patients from admission on.

Diabetes and its treatment. Three cases of diabetes shown. Discussion of modern treatment to establish tolerance and balanced diet. Acidosis and its early recognition. Discussion of laboratory and clinical methods. Treatment.

DR. W. A. JONES

CASE 1.—Familial kyphosis with unusual cord lesion. A man, aged 59, had a cervical-dorsal kyphosis since he can remember. His mother told him he had always had it. His father died at 85, and, so far as was known, he had had a similar trouble all of his life. This patient had no symptoms until four months ago when he had a weakness of his right leg, which was progressive, although he was able to walk without hindrance. Two months later he had a weakness of his right arm, associated with continuous wave-like movements of the muscles of the right arm and of the right chest similar to those found in progressive muscular atrophy. There are inco-ordination and ataxia in his right arm. The reflexes are all double plus without a Babinsky. Evidently, his symptoms are due to a gradually increasing pressure from his kyphosis, for which there is no remedy.

CASE 2.—A demonstration of a spinal-cord tumor from a woman aged 26, single, and without lues. In 1916 she showed evidences of a beginning dementia precox with a dementia most marked. In July, 1917, she had a pain in the lower dorsal region of the back. It was worse on movement, and kept her awake at night. The pain radiated in a definite line into the anterior surface of the right thigh. In August she had a weakness of the left leg, and in December she was unable to move either leg, and there was a marked loss of all forms of sensation up to the region of the groin. On account of her mental state it was thought unwise to operate, and she developed all of the physical findings due to a spinal-cord tumor—namely, involuntary movements, motor and sensory paralysis of the legs, absence of the lower abdominal reflexes, double-ankle and patellar clonus, and double Babinsky, with increased knee-jerks. The tumor was well defined, and, if her mental condition had warranted, it could have been easily removed.

CASE 3.—A case of locomotor ataxia, the patient having been bedridden for six years, characterized by marked excursions of both legs. The ataxia is so great that his legs are protected from extreme movements by a leather strap. In addition to this he has marked trophic skin disorder, involving both hands, arms, and feet, and a portion of his legs. This has been in evidence for his entire bedridden period. No treatment.

CASE 4.—Multiple sclerosis in a man of 31, who began with symptoms of inco-ordination, lost abdominal reflexes, double lateral nystagmus with increasing coarse, jerky inco-ordinate and tremor movements. Finally bedridden with a clearing up, apparently, of his nystagmus to a decided degree and a lessening of his ataxic movements.

DR. J. D. LEWIS

Tonsillectomy (Six cases) with the La Force hemostat tonsillectome.

Removal of a chalazion by splitting the margin of the lid and curetting the sac.

Denker operation for chronic maxillary empyema.

Suspension laryngoscopy under local anesthesia. Paresis of the vocal cords.

Suspension laryngoscopy under local anesthesia showing a thickening (flat papilloma) in the posterior commissure.

Paraffin plastic operation for saddle-nose.

Operation for hump-nose under local anesthesia. Transverse incision corresponding to position of the spectacle-bridge, elevation of skin and periosteum, removal of hump with gauge and chisel, and smoothing up bone with special rasps, wound-incision closed with Michels' suture-clips.

CASES

1. Boy of six from whose larynx thirty-three papillomata were removed under suspension laryngoscopy (August, 1916), with satisfactory results.

2. Young woman, aged 26, who has worn a tracheotomy tube for twenty-two years. Larynx completely filled with large multiple papillomata.

3. Man, aged 22, has had aural suppuration since he was six months old. Double radical mastoidectomy March 10, 1918. Hearing improved so that ordinary conversation is heard without difficulty.

4. Case of atypical Ludwig's angina in a young woman. Multiple incision and drainage in planes of the neck. Recovery.

5. Case of dead labyrinth, demonstrating the turning-chair reactions.

DR. ALBERT H. PARKS

Exploratory. Woman, aged 24. Persistent pain over gall-bladder; some acute attacks with jaundice. Pre-operative diagnosis: infection of gall-bladder. Operative findings: adhesions about the gall-bladder and pylorus, general pelvic adhesions, tubercular nodes about the abdomen, adhesions relieved about the gall-bladder and closure.

Bone-Graft.—Man, aged 28. Pseudo-arthritis at the lower one-third of tibia and fibula, following an old fracture. First operation in December, 1917. Section of tibia removed and an intramedullary autogenous bone-graft inserted. Cast put on. New-bone growth stimulated, and fairly firm callus bridging area of removed bone four and one-quarter inches in length. Duplicate operation on fibula; intra-medullary autogenous graft from opposite tibia by Lane technic. Cast.

Carcinoma of Pylorus.—Man, aged 57. Hour-glass stomach and slight obstruction of pylorus, as shown by bismuth meal. Upon opening the abdomen, general metastasis in liver, omentum, and all adjacent structures. Pylorus found moderately patent. Too advanced for re-section or gastro-enterostomy.

Resection of Glands of Neck.—Woman, aged 34. Tubercular glands on both sides of the neck; extensive involvement; thirteen previous operations for obstruction of the bowels, pelvic tubercular conditions, etc. Glands of one side of the neck removed in one mass; other side deferred for later operation.

Skin-Graft. Girl, aged 15. Had extensive burns

about left lower thigh and knee when four years of age with bad contractions and deformity. Operated on one year ago elsewhere with no relief. One month ago we did an extensive plastic, and got good results except a small area of one flap, which sloughed. Skin-graft from opposite leg by Thiersch method.

Inguinal Hernia.—Man, aged 25. Left inguinal hernia with long sac. Ferguson operation.

DR. THOS. A. PEPPARD

1. Use of tuberculin in diagnosis: cutaneous and subcutaneous tests. Technic. Interpretation. Skin sensitiveness different from tissue sensitiveness. A valuable diagnostic adjunct when used properly.

2. The fractional test-meal. Technic: various types of secretory curves. Not a "diagnostic ne plus ultra," but of considerably more value than the ordinary test-meal.

DR. F. C. RODDA

Clinic in Contagious Work—

This clinic was in the form of inspection of the City Hospital with the details of aseptic medical nursing, pointing out its application in general work.

DR. JALMAR H. SIMONS

Operative Gynecologic Clinic—

CASE 1.—Meta S., aged 29; married; menstruations, normal; four living children; labors, uncomplicated; one miscarriage at five months last October, followed by chills and fever; since then she has had frequent attacks of bilateral inguinal pain with temperature.

Examination: Diffuse redness of introitus, mucopurulent vaginal discharge; negative for gonococcus; uterus, enlarged slightly, good position; movement, limited; adherent tender masses in each adnexial region lying close to the uterus.

Diagnosis: Adnexial tumors.

Operation: Median abdominal incision; both ovaries enlarged, size of egg, cystic, adherent; extremities of tubes adherent by fine adhesions, not enlarged. Adhesions broken up, and ovaries resected.

CASE 2.—Maggie P., aged 32; married; menstruations, normal except for profuseness; four pregnancies with normal mechanism and convalescence. One abortion at three months. No complications. Two weeks ago began to have bilateral inguinal pain, abdominal distention, vomiting, fever and chills, dysuria, profuse yellow vaginal discharge. Discharge showed many pus cells; no gonococcus; leucocyte count, 12,000.

Examination: Yellow vaginal discharge, small rectocele; cervix enlarged, soft, mucopurulent discharge, good position; corpus enlarged, firm, symmetrical, tender, not freely movable, good position; tender adnexia; large, fluctuating movable masses in each adnexial region.

Diagnosis: Tubo-ovarian abscesses.

Operation: Median incision below umbilicus; numerous adhesions between intestinal loops, ovaries, tubes, and uterus; adhesions broken up; both tubes enlarged, adherent to ovaries and contained pus; right ovary abscessed, removed; left ovary resected; salpingectomy; drainage.

CASE 3.—Alice C., aged 26; married; menstruations, normal; five pregnancies, one at full term, instrumental; four criminal abortions, no complications except with

last one, three weeks ago which was followed by fever, distention, inguinal pain and tenderness, metrorrhagia. Temperature range, 99° to 102.5°. Leucocyte count, 16,000 to 18,000.

Examination: Diffuse redness of introitus; cervix soft, conical, points downwards and to left, mucopurulent discharge; corpus, slightly enlarged, displaced to right by large, soft, fluctuating, tender mass in left adnexial region.

Diagnosis: Post-abortion pelvic abscess.

Operation: Vaginal section and drainage.

Obstetrical Demonstration—

CASE 1.—Lottie B., aged 36; six full-term pregnancies with no complications other than laceration of the perineum and cervix; last pregnancy uneventful until the seventh month, when patient had an attack of excruciating left inguinal pain. These attacks were frequent until the onset of labor at the expected time. After patient had been in labor four hours, had excruciating, ripping pain in epigastrium.

Examination: Patient very pale, dyspneic, perspiration profuse, pulse running. Abdomen flat; fetal parts, very distinct intra-abdominal crepitus, no fetal heart, no labor pains. Mass in right, dullness in left, flank. External hemorrhage. Rectal examination, unable to reach the fetus.

Diagnosis: Rupture of the uterus.

Operation: Median abdominal incision below umbilicus. Complete left-sided rupture of uterus; fetus and placenta free in abdominal cavity; uterus contracted, lying to the right, large amount of blood to the left. Hysterectomy performed. Patient discharged on eighteenth day.

CASE 2.—Lyla N., aged 24; primipara in labor at full term. Repeated convulsions; blood-pressure, 170; urine contained large amount of albumin and casts; fetal heart, faint and very rapid; cervix, slightly dilated, partial effacement.

Diagnosis: Eclampsia.

Operation: Vaginal Cesarean section.

Result: Fetus died; no subsequent convulsions; albumin and casts disappeared in three days. Patient discharged on fifteenth day.

DR. ARTHUR T. MANN

Resection of the stomach. Ulcer of the stomach.

CASE.—This woman presents an interesting case because she is only thirty-one years old, and had a diagnosis of cancer of the stomach. Most cases of cancer occur after forty, though it may be met with in the twenties. This case had a mass which could be felt. She had been very thoroughly studied on the medical service of the University side of the City Hospital. The fractional test-meal, a portion drawn off every fifteen minutes, showed hydrochloric acid absent at fifteen minutes, and total acids, 25; at thirty minutes free HCl, absent, and total acids, 28; at one hour free HCl, absent, and total acids, 30. Microscopic blood was present in each specimen. An Ewald test-meal showed free HCl, 6; total, 41; lactic acid, double plus. The vomitus showed no free HCl; total acids, 61; lactic acid, double plus. The microscopic examination showed the Boas-Opler bacillus always present. Fluoroscopic examination and x-ray pictures showed an irregular, markedly narrowed lumen with a feeble peristalsis. She vomited nearly every day, sometimes after every meal, and occasionally had vom-

ited a little blood. She showed marked anemia, down to 1,700,000 red cells, and some loss of weight. The Wassermann was negative, and her history of stomach trouble extended over a period of four years.

On the findings, the only diagnosis which could be made was cancer of the stomach. When she was transferred to the surgical service we went over all of these tests again with the same results. Her age and the fact that previously she had vomited some blood occasionally were all that made us hesitate to call it cancer. The lack of HCl, and the constant presence of lactic acid and the Boas-Opler bacillus, made the diagnosis almost positive. However, in rare instances the Boas-Opler bacillus is found associated with lactic acid in non-cancerous retention, and in one or two cases it has been reported when some free HCl has been present. Before operating we stated that it was possible to have an indurated ulcer, and would reserve our diagnosis.

At operation an indurated mass was found extending from just below the cardiac orifice down to near the pylorus along the lesser curvature and running well down onto the anterior surface and a little way downwards on the posterior stomach surface. We then stated that we had been wrong in reserving the diagnosis, and that it must be cancer. However, whether cancer or ulcer, the treatment in this case would be the same, namely, resection of the affected portion of the stomach. The glands were enlarged all along the lesser curvature, and along the greater curvature more than half way to the cardia. No metastasis was found about the pancreas or in the liver.

More than half of the stomach was removed, from the pylorus to a point near the cardiac opening on a line slanting toward the left down to the greater curvature, including all the enlarged glands. This was done after the method of Moynihan, who severs the pylorus, ligates the vessels, separates the gastrocolic omentum and the gastrohepatic ligament, and then turns the loosened end of the stomach forward and performs a posterior gastro-enterostomy before severing the upper from the lower portion of the stomach. This makes the gastro-enterostomy much more easy and rapid than when the diseased portion of the stomach is first removed and the gastro-enterostomy is made between the stump of the stomach and the bowel, which certainly would have been difficult to do in this case with the short stump that was left.

The specimen removed looked like a cancer which had ulcerated away in the middle portions, but the pathological report showed it to be an indurated ulcer without cancer. This was a remarkable result after all the findings pointed so conclusively to cancer.

Her face is now filling out, and her red cells have jumped up to over 2,000,000 within two weeks from the operation.

Gastro-enterostomy; Leather-bottle stomach.

CASE.—This man, aged 36, had a history of stomach trouble, off and on, for seventeen years. His present history dates from January, three months time. He has lost thirty pounds in weight in this period. He has had pain, more or less, nearly every day. He has vomited frequently, and, of late, often three times a day. Ingestion of food has not given him marked relief, nor has the administration of alkalies; and he has vomited much the same after them. The vomitus is mostly the food he has eaten, and is not bile-stained, but some-

times is a little sour, though not markedly so. His abdominal muscles were tense, and only once was a palpable mass felt in the region of the stomach.

An Ewald test-meal on March 6, 1918, showed free HCl, 17; total acids, 78; lactic acid, negative, and Boas-Opler bacillus, absent. April 3, a fractional test-meal showed at fifteen minutes free HCl, 9; total acids, 30; lactic acid, negative; Boas-Opler bacillus, absent; microscopic blood, present; at thirty minutes, free HCl, 286; total acids, 34; lactic acid, negative; microscopic blood, present; at forty-five minutes free HCl, 19; total acids, 47; lactic acid, absent; microscopic blood, present; at one hour free HCl, 30; total acid, 52; lactic acid, absent, microscopic blood, present. No Boas-Opler bacillus was found in any of the specimens.

The x-ray fluoroscopic showed a mass rather uniform and funnel-like occupying the lower two-thirds of the stomach. The opening through it was long and narrow, the peristalsis of the remaining portion of the stomach was increased, and the stomach emptied in normal time and with a normal duodenal cap. The x-ray examination was repeated after the administration of atropine, not given to full tolerance. The results were the same except that the peristalsis was delayed somewhat and the stomach emptied more slowly. There was no dilatation in the channel of the constricted area.

The case was evidently one of rather extensive carcinoma of the infiltrating type, though the stomach contents contained decidedly more hydrochloric acid than one would expect, and there was absence of lactic acid and the Boas-Opler bacillus. The microscopic blood might be either from cancer or ulcer, or possibly from lues.

Operation showed, apparently, a leather-bottle stomach with cancer infiltration of at least two-thirds of the stomach, extending from the pylorus toward the cardia and forming a uniform slightly funnel-shaped mass entirely about the stomach lumen. This was smooth and flexible and semicartilaginous in hardness. There were some irregular masses of secondaries in the region of the pancreas. Complete excision was deemed impossible if the growth were cancer, and a posterior gastro-enterostomy was performed well toward the cardiac bulge of the stomach in the only free pouch of the stomach which remained. This was done to give a free passage for food, which up to this time could be passed through the pylorus only because of the excessive peristalsis present, but which soon would be more or less impossible because of the extension of the growth. A small superficial piece was removed for examination, and was later reported as connective tissue.

This raised again the question of a late lesion of syphilis. A Wassermann examination made before operation was inconclusive. It was now again taken, and was negative. Our diagnosis is cancer, but because a negative Wassermann does not always mean "without syphilis" we are going to try antisiphilitic measures on the bare possibility that it may be a late lesion of syphilis, and at proper intervals we shall repeat the Wassermann tests. We do not, however, expect to be able to change the diagnosis of carcinoma.

The portion sent the pathologist was too small from which to make a reliable diagnosis.

Multiple osteomyelitis with extensive regeneration of both tibiae. Moorhof's bone-wax used.

CASE.—This boy is now walking on two useful legs. Two years and a half ago this boy had a moderate sore

throat, followed three weeks later by acute rheumatism. He was brought to the City Hospital, on the medical service. Both knees swelled large and fluctuated, the left ankle and the right wrist were also involved. His temperature ran to 103.5° F. Under medical treatment the joints subsided, but both legs and the right arm began to enlarge and to become painful. Blood-cultures taken at three different times showed a staphylococcus aureus. The temperature shot up to 104.5° F., and small incisions in one leg and in the right arm showed large quantities of pus loaded with the staphylococci. At this time I first saw the patient, and confirmed the new diagnosis of osteomyelitis and pus breaking through the bone into the soft tissues of both legs and the right arm, and I advised immediate operation. What had happened was a sore throat followed by a streptococcal infection, giving the evident rheumatic joints, and this was followed by a staphylococcal infection giving the multiple osteomyelitis.

At operation both tibiae were infected from one end to the other, and the anterior portions were removed from epiphysis to epiphysis. The radius was involved also. This patient was in the hospital over a year, and had several operations for the removal of sequestra of some of the remaining portions of the tibiae and the radius. At one time, after removing large sequestra, both tibiae were broken in continuity, the left one in two places and the right one in one place, where nothing remained but the periosteum, and the legs could be freely bent about at these places. Iodoform wax (the Moorhof bone-wax) was used to fill in the spaces and though pus discharged from about the wax freely, bone gradually grew in to replace the wax, and, as you can see, he now walks well on legs that are solid; the tibiae have completely regenerated at all points where bone was removed, and both tibiae are 50 per cent larger than normal. The iodoform wax is composed of iodoform, 20 per cent; rape-seed oil, 40 per cent; and spermaceti, 40 per cent. This, melted at a low temperature, is poured into the cavities, where it hardens into a solid wax plug, and does not burn the tissues. We use it in cases of chronic osteomyelitic cavities where the infection is of low grade. These cavities may often be cleaned out with a chisel and gouge, disinfected with 95 per cent carbolic acid, followed in about one minute with 95 per cent alcohol, the cavity thoroughly dried, then filled with the iodoform wax, and the soft parts sutured over it for healing by first intention. It is often successful, and then the bone granulation tissue gradually grows in and replaces the wax with firm bone. In cases so infected that it is not wise to suture the soft parts above the wax, rubber, or one of its substitutes, is laid on top of the wax and the usual gauze dressing applied above it. The discharge easily seeps out about the wax and from beneath the rubber. The change of outside dressings is made without pain, which is a great change from the usual iodoform-gauze packings. The wax remains in place often for weeks before renewal, and is slowly replaced by new bone. The Bipp paste of the British could doubtless be used in the same way.

(Reports continued in next issue)

DR. H. L. STAPLES

CASE 1.—The condition here is one termed by many *essential or simple hypertonus*. A business man, aged 60, who has had financial reverses and family bereavements, smoked until recently six or eight strong cigars

daily. Heart, lungs, and kidneys, normal. Systolic blood-pressure 180-190 for some time. Recently he had a severe epistaxis, which I allowed to continue for several hours. Next day he reported that he felt like a new man. His diet, liquors, coffee, and smoking were restricted; and in two weeks his pressure dropped to 160-165, and has so continued. The epistaxis was nature's method of relief, and in cases without hemorrhage I can speak with gratitude of venesection. Two drugs only are indicated, calomel and castor oil, to combat constipation. Avoid hard mental labor, severe physical exertion, and nervous strain.

CASE 2.—A young man, aged 30, sprung from an exceedingly neurotic family, smokes to excess, and worries over business affairs. Systolic pressure 160-170. Heart, lungs, kidneys and Wassermann, negative. Regulation of diet and personal habits had very slight effect. A thorough search should be made for the cause.

Allbut says: "It may be, though I speak with much doubt, that for some persons a high pressure is normal at or under middle life, even up to 160-170, especially under excitement."

CASE 3.—One of nephritic hypertonus. Systolic, 230-250. Albumin, abundant casts, and general anasarca. This patient will die shortly of uremia or ventricular failure. Absolute rest, milk diet, laxatives and morphine to control convulsions, are indicated. Digitalis is a valuable drug for cardiac decompensation. Ampules and hypodermatic tablets of strophanthin were shown for intravenous administration, which are highly efficient to induce cardiac reaction when other measures fail.

CASE 4.—One of Adams-Stokes syndrome. The original articles of Adams, Stokes, and His were exhibited and sections read. Pulse representing the ventricular systole about 18-20 due to destruction of bundle of His. He has occasional loss of consciousness. Treatment: rest, diet, and atropine administered regularly by the hypodermatic method.

CASE 5.—Aneurysm of ascending aorta. Wassermann positive. Syphilis has existed in all my cases. X-ray best method of diagnosis, showing in this case a tumor the size of a baseball in upper right chest. Marked dullness exists in this area. Has had dysphonia, aphonia and dysphagia indicating involvement of left laryngeal nerve. Rest, diet, and iodide potassium as recommended by Balfour have given him much benefit.

DR. H. B. SWEETSER

CASE 1.—Mrs. B., aged 33; widow; two children.

Disease: Persistent purulent discharge from sinus resulting from an old pelvic abscess drained two years ago through Douglas' cul-de-sac.

Operation: Left salpingo-oophorectomy through vaginal route; clamps left on stump.

CASE 2.—Disease: metrorrhagia; lacerated cervix, and hemorrhoids.

Operation: Curettage and sterilization of uterine cavity with iodine; repair of cervix; clamp and cautery for three hemorrhoidal masses.

CASE 3.—Mrs. P., colored; aged 36; married; nullipara.

Disease: Large fibroid uterus, irregular, with many nodules dissecting and growing into the left broad ligament; profuse metrorrhagia; hemoglobin, 40 per cent; erythrocytes, 1,500,000.

Operation: Total removal of uterus, ovaries, and tubes. Drainage through vagina.

CASE 4.—Mrs. J., aged 29; married; two children.

Disease: Double pyosalpinx; colon-bacillus infection; dense adhesions of sigmoid over tubes and uterus.

Operation: Transverse suprapubic incision; removed both tubes and ovaries; one ounce of ether poured into pelvis; coffer-dam drain of three large cigarette-drains down to the cul-de-sac.

Note.—At the end of one month recovery followed in each case without complications.

DR. H. L. ULRICH

Dr. Ulrich exhibited cases of transverse myelitis, multiple sclerosis, tabes dorsalis, nephritis, and heart lesions; performed lumbar puncture; and made blood-transfusion in cases of pernicious anemia. Wards were visited during four days of the Clinic, and many cases of interest were seen and discussed.

EITEL HOSPITAL

DR. LEO M. CRAFTS

A demonstration of the extensive technic of a neurological examination, including the more recent developments and refinements of the reflex tests, which Church has aptly termed a fine art, and of which the general practitioner should have a good working knowledge.

As subjects for this demonstration three very interesting cases were presented, one of clear multiple sclerosis (Case 8 of the group included in a paper by the author on this subject, published in the *Jour. of the Am. Med. Assn.*, October 6, 1917), showing the apoplectic form onset, partial monoplegia, nystagmus, slight speech-disturbance, and intention tremor.

The other two cases, sisters, taken ill within a week of each other, apparently a typical onset of acute poliomyelitis, one aged two and the other three years. Present picture of one is clearly remaining disability of this type, an entirely powerless atrophied right arm. While the other sister presents a somewhat dwarfed left arm, with full amplitude of motion in all directions, no atrophied muscle groups, intention tremor in left hand, nystagmus, dysarthria, spasmodic torticollis, and active reflexes, mainly a multiple sclerosis syndrome.

DR. GEO. G. EITEL

Thyroidectomy.

Herniotomy, left inguinal.

Appendectomy.

Removal of rectal fistula.

Amputation of phalanges and metacarpal bone.

Salpingo-oophorectomy.

Prostatectomy.

Fibroid tumor of uterus.

Herniotomy, left inguinal.

Herniotomy, left inguinal.

Herniotomy, left inguinal.

Trachelorrhaphy, perineorrhaphy, curettement.

Tubal pregnancy (right side).

Alexander's operation.

Removal of breast.

Amputation of toe.

Cauterization of warts.

Cholecystectomy and appendectomy.

DR. GEORGE A. KOHLER

Tonsillectomies under general anesthesia

DR. WM. LERCHE, ST. PAUL

Removal of a copper penny from the esophagus
Extraction of teeth

DR. JUSTUS MATTHEWS

Tonsillectomies under general anesthesia

DR. EMIL C. ROBITSHEK

Tonsillectomies under general anesthesia

DR. CHARLES N. SPRATT

Mastoidectomy, recurrent mastoidectomy, glaucoma
Tonsillectomies under local anesthesia
Submucous resection under local anesthesia

FAIRVIEW HOSPITAL

DR. N. H. SCHELDROP

CASE 1.—Mrs. L., aged 49. Family history, good. Personal history: operated on twenty-two years ago for ovarian tumors, sixteen years ago for gall-stones. Present complaint: pain over ninth right rib, extending to right shoulder, nausea, constipated, jaundiced, severe pain last three years. Blood-pressure: systolic 140, diastolic 90; p.p., 50. Urinalysis: albumin, leucocytes, diplococci, no T.B. or casts. Blood-examination: leucocytes, 12,800; hemoglobin, 75 per cent; erythrocytes, 4,600,000. Stomach examination: total acidity, 85; free hydrochloric acid, 45. Diagnosis: gall-stones. Pathological findings: gall-bladder thick and filled with stones; drainage on account of chronic inflammation of pancreas. Recovery.

CASE 2.—Miss S., aged 26. Family history, good. Personal history: ill for past five years. Present complaint: pain over McBurney's point, nausea, vomiting, localized tenderness, dysmenorrhea, leucorrhea, tired and weak. Blood-pressure: systolic, 130; diastolic, 90; p.p., 40. Urinalysis: normal. Blood-examination: normal. Stomach-examination, negative. Diagnosis: Appendicitis, right ovarian cyst, pus tubes. Operation: right ovarian cyst removed also both tubes and appendix, dilatation of cervix, application of iodine and carbolic. Recovery.

CASE 3.—Mrs. W., aged 26. Personal history: pleurisy at age of eleven, six years ago during pregnancy developed large veins on thigh and right knee, both limbs painful, leucorrhea, dysmenorrhea. Urinalysis: normal. Blood-examination, normal. Blood-pressure, normal. Diagnosis: varicose veins both limbs, endometritis, inflammation of cervix. Treatment: dilatation of cervix, application of carbolic and iodine, repair of cervix and varicose veins excised. Recovery.

CASE 4.—Miss B., aged 14. Family history, good. Personal history: small tumor over scapula on right side. Examination: tumor feels like lipoma, very soft. Urinalysis, normal. Blood-pressure, normal. Blood-examination: leucocytes, 10,500; hemoglobin, 80 per cent. Diagnosis: infected lipoma due to former exploratory aspiration. Treatment: tumor excised, found to be tubercular osteomyelitis of the rib, rib removed, wound cauterized by carbolic and alcohol. Recovery.

CASE 5.—Mrs. V., aged 33. Family history, good. Personal history: married several years, no children,

wishes to become pregnant, complains of rheumatic pains through different joints. Urinalysis, normal. Blood-examination: leucocytes, 8,300; hemoglobin, 75 per cent. Gastric-examination: total acidity, 88; free hydrochloric acid, 56; combined hydrochloric, 32; lactic acid trace; no blood; no occult blood. Diagnosis: stenosis of cervix, hydrosalpinx, chronic inflammation of the appendix and pyorrhea. Operation: dilatation of cervix, application of iodine, inserted a stem. Laparotomy: appendix removed, both tubes opened up. Recovery.

CASE 6.—Mr. G., aged 57. Family history, good. Three years ago began to feel a buzzing in head, dizziness, also distention of stomach after eating, had craving for food but after eating felt bad, distressed with gas, constipated. Blood-pressure: systolic, 100; diastolic, 68; p.p., 32. Urinalysis: normal. Blood-examination: 4,000,000 reds, 5,600 whites, hemoglobin, 70 per cent. X-ray examination: prolapse stomach with adhesions of the pylorus to gall-bladder. Diagnosis: cholecystitis, prolapsed stomach. Pathological findings: thickened gall-bladder with adhesions to pyloric end of stomach. Operation: gall-bladder removed, drainage, stomach suspended, appendix removed. Recovery.

CASE 7.—Mrs. P., aged 38. Family history, good. Previous history: tumor of abdominal wall removed a year ago. Present history: after this operation began to have backache, weak, nervous, palpitation, noticed swelling in front of neck, which caused trouble in breathing, sick headaches, vomiting spells. Urinalysis: albumin, three plus, hyaline and granular casts, pus cells, two plus. Blood-examination: 12,600 whites, 4,000,000 reds, hemoglobin 60 per cent. Blood-pressure: systolic, 170; diastolic, 100. Diagnosis: exophthalmic goiter with mitral obstruction and nephritis. Operation: right lobe of thyroid removed, left lobe ligated owing to bad condition on operating-table. Recovery.

CASE 8.—Mr. B., aged 23. One month ago noted dull pain across center of abdomen, which finally localized over appendix, constipated, anorexia. Diagnosis: chronic appendicitis. Appendectomy performed March 20, 1918; appendix slightly inflamed with marked perityphlitis. After operation temperature varied from normal to 101. Urinalysis: albumin and few granular casts. Leucocytes, 9,950 on the 4th day after operation; 5th day, 27,000; 12th day, 32,000; 15th day, 33,250; and 16th day, 30,600. Two skiagrams taken of chest and liver and found negative. Typhoid test, negative. Diagnosis: hepatic abscess. Treatment: incision was made through the back with resection of rib and an aspirating needle punctured through the liver. No abscess was discovered. This incision was sewed up and another made over the costal margin of the tenth and eleventh ribs. Adhesions between the hepatic flexure of the colon and liver. Upon dissecting the colon from the upper margin of the liver, it was found to fluctuate; and upon pushing a pair of artery forceps up into this mass, a large hepatic abscess was opened up and drained. Recovery.

CASE 9.—Mr. M., aged 19. Has had more or less trouble with tonsils all of his life. On January 28th, 1918, had tonsillectomy under local anesthesia. Has also had pain and cramps in lower abdomen. Last year pain had localized in the region of the appendix. During attacks always felt nauseated but never vomited. Sleeps well, bowels regular, appetite poor. Good reason to believe this trouble caused by metastatic infection from

tonsils. Urinalysis, normal. Blood-pressure, normal. Leucocyte count, 10,500. Diagnosis: appendicitis. Treatment: appendectomy, badly swollen and inflamed appendix removed. Recovery.

CASE 10.—Mrs. B., aged 24. During delivery last January was severely lacerated; laceration extending completely through the vagina and up into the rectum about four inches. Four attempts were made to repair this laceration at different times without result. She came to hospital three days ago and a complete dissection of vaginal wall from rectum was made and the building up of vagina and perineal floor was performed with dissection of sphincter muscles. Result: the repair of vagina perfect, but sphincter did not hold. Recommended her to come back in three months for repair of sphincter.

CASE 11.—Mrs. K., aged 45. Ill about six months. Abdomen very much distended, emaciated, constipated. Urinalysis, normal. Blood-examination: leucocytes, 10,000, reds 4,440,000, hemoglobin 60 per cent. Diagnosis: large ovarian cyst. Treatment: extirpation of the large echinococcal cyst. Recovery.

CASE 12.—Mrs. L., aged 45. Native of Florida. Gallstones some years ago, complains of weight in abdomen, irregular menstruation, emaciated, slight temperature during afternoon. Urinalysis: albumin but no casts. Blood-count: hemoglobin 70 per cent, 4,200,000 reds, 11,000 whites. Blood-pressure, normal. Diagnosis: large ovarian cyst with pyosalpinx. Tubes both removed, large ovarian cyst adherent to posterior pelvic wall of uterus, sigmoid and cecum. Part of small intestine also adherent. The ovarian cyst was dissected out, abdomen closed in usual manner with drainage tube. Patient died on the second day from pulmonary embolism.

CASE 13.—Mr. W., aged 36. Eleven years ago operated on for osteomyelitis of left femur; three years ago had another operation, sequestrum removed; one year ago had another operation and sequestrum removed. Patient complains of pain in left limb extending from hip down to ankle. Pain most severe upon deep pressure over the lower shaft of femur. X-ray examination: sequestrum in the lower shaft. Urinalysis: albumin but no casts. Blood-pressure, normal. Blood-count: hemoglobin 75 per cent, leucocytes 9,400. Diagnosis: old sequestrum with abscesses. Incision was made over the lower external aspect of femur. Sequestrum about five inches long was removed and considerable pus was curetted out. The cavity was packed with iodoform gauze, one stitch with silk worm gut. Temperature, 99° and 101°. Recovery.

CASE 14.—Mrs. N., aged 23. Married seven months, pregnant two months; complains of pain, nausea, vomiting, constipated, localized tenderness over McBurney's point. Temperature, 99.2°. Blood-pressure, normal. Urinalysis, normal. Blood count: hemoglobin 75 per cent, leucocytes 8,950. Diagnosis: acute appendicitis. Treatment: appendectomy, large inflamed appendix removed with considerable pus in it. Recovery. Did not miscarry.

(Reports continued in next issue)

DR. IVAR SIVERTSEN

CASE 1.—Mr. O. C. was referred because of severe abdominal pain and a history of jaundice. Had temperature of 101°, vomited several times before he was seen by me, had decided tenderness over the gall-bladder

region, and gave a history of previous attacks of a similar nature.

Diagnosis, gall-stone colic.

Operation: Found a small gall-bladder, which was tense and was about on a level with the fourth rib. A great many adhesions about the gall-bladder. After careful manipulation, the gall-bladder was opened and drained. Numerous gall-stones were present. Difficult to place tube in gall-bladder, but this was accomplished, and gauze was placed about tube. On the evening of the operation the patient developed a temperature of 104°; pulse, 140; cough and typical symptoms of pneumonia; and died the second day after operation.

CASE 2.—Mrs. H. W. gives a history of very severe pain in the abdomen. Menstrual history, negative, though came on soon after last period with a decided tenderness over the pelvic region, and a vaginal discharge. Upon examination patient had a temperature of 102°, and pulse of 100. On vaginal examination a mass was found in the cul-de-sac.

Diagnosis, pelvic abscess.

Operation: Pelvic abscess was opened and drained. A great deal of pus present. It was found necessary to perform another operation, and through a median incision several tubes were placed in the pelvis and behind the uterus. The patient is still in the hospital.

CASE 3.—Mrs. O. A. A post-operative case. This patient came to the hospital thirty-six hours after she was taken sick with severe abdominal pains, which were of an intermittent type. Upon examination found the abdomen rigid; pulse, 88; and temperature, normal. She gave a history of having vomited but once, and that she had had no bowel movements, and small amount of gas had passed.

Diagnosis, intestinal obstruction.

Operation: It was shown that she had an intestinal obstruction by a loop of bowels having passed into the lesser peritoneal cavity through a rent in the transverse mesocolon; also an hour-glass stomach with a ruptured gastric ulcer. A partial resection of the stomach was made; then a gastrogastrostomy followed by posterior gastroenterostomy at the same sitting. She made a very good recovery.

CASE 4.—Mrs. O. N., came with the following history in brief: Menstrual periods had always been regular up to six months ago, when they changed from the four- to three-week type. Last menstruation was on June 12, 1917. On the following day she had severe pain, and, being a sufferer from hemorrhoids, she thought her pain was due to the hemorrhoids. Had to go to bed. Several days later, she came to the hospital to be operated on for hemorrhoids, but under gas a vaginal examination was made and a mass was found in the left ovary. Diagnosis of cystic ovary was made, and operation advised.

Operation: Laparotomy; free blood was found in peritoneal cavity. The left ovary contained a large bloody tumor. The left tube was free. Removal of this bloody tumor proved it to be an ovarian pregnancy in the Graafian follicle.

CASE 5.—Mrs. A. B., came because of stomach symptoms and also a tumor of the left breast.

Diagnosis, schirrhous carcinoma of the breast.

Careful stomach examination proved negative, though there was extreme tenderness over the stomach region.

Tentative diagnosis: Carcinoma of the pylorus or the liver.

Operation: It was proved that patient had several metastatic growths in the liver. The incision was closed, and the patient died the following day from exhaustion.

LA SALLE BUILDING OPERATING-ROOM

DR. ROBERT A. CAMPBELL

CASE 1.—Miss O., aged 28, strong and healthy. Had recurrent attacks of acute tonsillitis, and chronic cryptic tonsillitis. Tonsillectomy was done six days ago under local anesthesia with neocaine-surrenine, 1.5 per cent; no pain, no hemorrhage. She remained in bed one day, resumed her work as nurse-maid on the third day, and is feeling perfectly well now. Inspection shows the anterior and posterior pillars intact, all the tonsil removed, no fibers of the superior constrictor muscle removed. A perfect result of operation.

CASE 2.—Miss F., aged 36. Had hyperesthetic rhinitis six months. Chronic cryptic tonsillitis. Tonsils removed fifteen days ago under nitrous-oxide, oxygen, and ether anesthesia at Abbott Hospital. Anterior and posterior pillars are in place; no fibers of superior constrictor muscle have been removed; all the tonsillar tissue has been removed. A perfect result.

CASE 3.—W. C., aged 7. Chronic laryngitis (hoarseness of voice); removal of tonsils and adenoids under ether two years ago cured the laryngitis, pillars are in place; no tonsillar tissue left in the tonsillar space; no contractions are seen, showing that no muscular fibers were removed. A perfect result.

CASE 4.—Miss F., severe acute conjunctivitis six days; Koch-Weeks bacillus present; conjunctiva reddened; no visual disturbance; no change in color of iris; no increased tension; very little pain. Treatment: cold applications and instillations of a mild silver salt in solution.

CASE 5.—Mrs. F. Acute iritis in right eye. Conjunctiva reddened; complains of pain and blurring of vision; no increased tension; iris is green in this eye, and blue in the left; its distinctness of pattern is lost, and mobility is reduced; differentiation is thus made from conjunctivitis and glaucoma. The dimness of vision is due to exudation of inflammatory products into the chambers in front of the lens and pupil, and the pain is due to irritation of the ciliary nerves.

Treatment: hot applications, atropine instillations, internally moderate doses of calomel at bedtime, and fifteen drops of oil of wintergreen on sugar three times a day.

CASE 6.—Mrs. F. Acute glaucoma secondary to iritis. Conjunctiva of left eye reddened; great pain radiating from the eye; with the finger-tips upon the upper lid over the eyeball, pressure shows a hard eye; tension, plus one; vision is nearly gone; and the cornea is anesthetized by the pressure of the intra-ocular fluids upon the nerves. Differentiated from conjunctivitis and iritis by the hardness of the eyeball, anesthesia of the cornea, and the intense pain. Upon ophthalmoscopic examination no view of the fundus can be seen to show a cupping of the optic disc because of the exudate in the anterior and posterior chambers.

Treatment: Previous to her coming to me four days ago she had been under eserine instillations for contracting the pupil to reduce the tension. As she had already lost her vision for a month and the iritis was very severe, I decided against any operation at pres-

ent, planning first to bring the iritis under control. Atropine, which would benefit the iritis, is contra-indicated by the glaucomatous tension, and would make her condition worse; therefore we cannot use that.

Upon her first visit she had one sub-conjunctival injection of oxycyanide of mercury 1:6,000, followed by an amelioration of the pain, a slight, but definite, reduction of the tension, and a slight improvement of vision. We shall continue this at intervals of three or four days.

DR. E. H. PARKER

Showed eight maxillary antrum cases to demonstrate the different character of discharge in acute and chronic cases. Radiographs showing tooth-etiology of most chronic cases. Demonstration of transillumination in mild recurrent antrum-suppurations with constant tooth-etiology. The fallacy of curettement of most chronic antra. A case showing cured chronic antrum with firm functioning mucous membranes. That frontal headache is more often a symptom of antrum trouble than of frontal sinus suppuration.

DR. J. F. SCHEFCIK

CASE 1.—Chronic empyema of left maxillary antrum. Patient, female, aged 76, who gives history of bad teeth, extracted; pain over antrum; and pus discharge for two years.

Operation: Modified Denker. Patient still under treatment. Discharge has ceased. Treatment consisted of irrigation three times daily for ten minutes, with 0.2 per cent solution of chlorazene carried out by the patient. This is still being practiced, but has been reduced to once daily, with occasional visits to the office.

CASE 2.—Exhibition of post-operative case of strabismus, showing result of tenotomy, with retaining sutures.

NORTHWESTERN HOSPITAL

DR. C. D. HARRINGTON

Röntgenology.

Demonstration of barium study of the colon.

Demonstration of plates of colon and stomach.

Demonstration of plates of fractures.

Demonstration of plates of lung conditions.

And daily demonstrations of x-ray plates at Radisson Hotel.

DR. HERBERT W. JONES

Six cases of brain-surgery.

1. Case of man four years after removal of tumor of occipital lobe. Tumor three inches long and two inches in diameter. Patient working every day.

2. Case of cerebellar tumor with decompression, with relief of respiratory symptoms with deep cyanosis.

3. Case of infantile epilepsy cured by operation.

4. Late results of neglected brain tumor. Patient with blindness and epilepsy.

5. Case of hydrocephalus.

6. Specimen of tumor in fourth ventricle.

DR. JOHN M. LAJOIE

A case of pernicious anemia was shown. Male, aged 60 years, practically no subjective symptoms. Has ana-chlorhydria; spleen just palpable; urine contains urobilinogen; red-blood count, 1.5 million; white-blood

count, 4,000; polymorphonuclears, 54 per cent; platelets, 3,700; a large number of blasts present in blood-smear. Patient was given 500 c.c. citrated blood using the non-surgical method. The indications and technic of transfusion were discussed, as also were the indications for splenectomy.

DR. HORACE NEWHART

CASE 1.—Radical mastoid operation. Mrs. C. T., aged 34, chronic bilateral suppurative otitis media for sixteen years. All efforts at local treatment failed to cure discharge. Radical mastoid, right ear, operated on on March 29. Removal of cortex, left, shows eburnated mastoid, antrum lies deep, filled with pus and granulation tissue, in which lie embedded the incus and remnant of the malleus. Lateral attic wall and wall of the antrum removed. Tube curetted. Plastic after Siebenmann. Postauricular wound closed. Cavity loosely packed with iodoform gauze.

CASES 2-5.—Four tonsillectomies. Demonstration of the bloodless modified Sluder method. Operations (by Dr. Camp) with the Demarest-Sluder tonsillotome, dissection of the pedicle on the distal side of the blade, using the Freer submucous-dissector.

CASE 6.—Male, aged 17. Chronic suppurative otitis media following scarlet fever. Prepared for radical mastoid operation, but because patient has developed an acute nephritis, discovered this morning, operation is deferred.

CASE 7.—Mrs. K., aged 33. Demonstration of a case of iodoform dermatitis following radical mastoid operation eight days ago.

CASE 8.—Demonstration of simple mastoid. M. G., aged 3. Acute suppurative otitis media of three weeks' standing following influenza. Operation April 5, 1918. Entire mastoid including tip removed. Bacteriologist's report at time of operation shows pneumococcus and streptococcus. Temperature, 104.4°; four hours later normal temperature.

CASE 9.—D. D., a girl, aged 10. Tonsillectomy under general anesthesia. Dissection with knife and snare, with ligation of all bleeding points.

CASE 10.—L. M., aged 12. Tonsillectomy, modified Sluder bloodless operation by Dr. Camp.

CASE 11.—E. L., aged 10. Tonsillectomy (Sluder bloodless method), adenectomy, and removal of massive lingual tonsil by means of the cold snare.

CASE 12.—Miss A. A., aged 24. Radical mastoid operation. Patient has had suppurating right ear since scarlet fever fourteen years ago. Eburnated mastoid, small antrum (confirming röntgenograph); attic filled with pus and granulation-tissue, dura over the antrum and attic exposed. Modified plastic to form a large flap above to cover defect in bone over dura of middle fossa.

CASE 13.—Tuberculosis of nasal septum. H. S., aged 32. Three years ago had resection of nasal septum by laryngologist in Arkansas. When first seen two years ago there was complete nasal obstruction, caused by a soft mass corresponding to site of the septal cartilage. Has had treatment with cautery and punch forceps. Passed from observation for a considerable time. Now large defect. Giant-cells in tissue of edge of perforation. Condition greatly improved by treatment with electrocautery and trichloroacetic acid.

CASE 14.—Miss B. B., aged 14. Modified bloodless Sluder operation (by Dr. Camp).

DR. GUSTAV SCHWYZER

CASE 1.—Colloid goiter in an eighteen-year-old girl, who was operated on two years ago for a similar goiter on the other side. Resection.

CASE 2.—Non-operative myxedema on a woman, aged 33, with waxen expression, and bloated appearance of face. Hemoglobin, reduced to 55 per cent. Skin of face, chest, arms, and legs, dry and peeling off; hair, dry; teeth, defective and lacking; swelling of legs, heavy speech. Patient is apathetic, shows lack of energy, and slow in her movements.

CASE 3.—Post-operative myxedema. Patient had had multiple excisions of goiters, which recurred. Similar picture as the one preceding.

CASE 4.—A very large periosteal sarcoma of the femur with primary sarcoma in the right thyroid half (small goiter) in a girl, aged 19. Diagnosis and treatment.

CASE 5.—Exophthalmic goiter in a man, aged 18, with one side exophthalmic.

CASE 6.—Foreign body in os calcis in a boy, aged 17. X-ray picture taken before and after the operation.

CASE 7.—Appendicitis subacuta. Appendectomy. Patient a man aged 40.

CASE 8.—Tuberculosis of joints. Demonstration of a tuberculous synovitis of a right-ankle joint in a man aged 32. Conservative treatment.

CASE 9.—Demonstration of a resected right tuberculous knee of a woman aged 25.

DRS. E. S. AND G. ELMER STROUT

Three tonsillectomies. Demonstration of bloodless and painless dissection under local anesthesia.

Needling of secondary cataract three months after extraction of lens. Operation by Dr. E. S. Strout.

Two tonsillectomies in young adults. Demonstration under general anesthesia of use of Sluder instrument, following the technic of Freligh. Operation by Dr. G. Elmer Strout.

Eight tonsillectomies in children. Demonstration under general anesthesia of modified Sluder method. Freligh's technic. Operations by Dr. G. Elmer Strout.

Muscle advancements. Two cases of convergent strabismus under local anesthesia.

CASE 1.—Demonstration of advancement by tucking method. Operation by Dr. E. S. Strout.

CASE 2.—Reese resection by Dr. G. Elmer Strout.

CASE 3.—Acute glaucoma. Tension, normal. Iridectomy by Dr. E. S. Strout two months before.

Exhibition of post-operative advancements showing results by both tucking and resection methods.

Exhibition of an unusual case of neurosis following extraction of teeth, with continuous rhythmic motion of the lower jaw.

Exhibition of case in which exenteration of orbit for epithelioma had been done ten months before.

Patients and x-ray pictures of foreign bodies in bronchi exhibited.

DR. DOUGLAS WOOD

CASE 1.—T. N., aged 19. History of external strabismus, 15 degrees, "since birth," with 6/6 vision in each eye under correction.

Operation: Tucking of right internal rectus in under local.

NORWEGIAN DEACONESS HOSPITAL DR. WESLEY BISHOP

CASE 1.—Anna P., aged 26. Chronic suppuration of the right middle ear; duration two years.

Complaint: In addition to aural discharge, has headaches, which are confined to the right side of the head; the right mastoid is tender on pressure.

Diagnosis: Chronic suppurative otitis and chronic mastoiditis.

Operation: Radical mastoid.

CASE 2.—Paul D. Complaint: Growths on both eyes.

Diagnosis: Pterygium (double).

Operation: McReynolds' transplantation.

DR. C. P. NELSON

CASE 1.—Female, aged 23; had one child two years ago; complains of profuse and painful menstruation, with a bearing-down feeling. Pain in the abdomen, especially on the right side. Nausea. Sensitive in the region of the appendix. Uterus enlarged, slightly, and somewhat retroverted. Perineum lacerated. Dilation and curettage. Repair of perineum. Abdomen explored through median incision. A chronically inflamed appendix removed. Round ligaments shortened.

CASE 2.—Female, aged 6. Systolic mitral murmur, with enlargement of the heart; adenoids obstructive; tonsils infected. Adenoids and tonsils removed under gas-ether anesthesia.

CASE 3.—Male, aged 28; had several attacks of inflammatory rheumatism; tonsils small, submerged, and infected. Tonsils removed under gas-ether anesthesia.

DR. A. TORLAND

Patient, aged 58, had had dacryocystitis with pus in the tear-sac for several years. Acute attack with obstruction of the tear-duct, great edema over the tear-sac and violent headache.

Treatment: Opening of the lachrymal canaliculus, profuse discharge of pus. Hot fomentations applied to the edema for four days; the edema had then subsided and the tearsac was removed by extirpation.

DR. A. G. WETHALL

Demonstration of the phenolsulphonephthalein test.

ST. ANDREWS HOSPITAL

DRS. F. J. AND J. A. PRATT

Three cases of Smith-Indian cataract operation, removing the lens with its capsule, were uneventful. No pain followed the operation. Bandages were removed, and eyes inspected the tenth day. They showed little redness. The operations were a complete success, and the patients left the hospital in 12, 14, and 16 days, respectively.

The special light fenestrated clamps, used with Stüder technic, and allowed to stay on the tonsils for ten minutes, produced bloodless operations in 75 per cent of the cases.

The sclerosed radical mastoid, operated on by the electric burr, demonstrated the ease of operation in these difficult cases.

At our work done at the University Dispensary, particular attention was paid to ethmoidal operations.

ST. BARNABAS HOSPITAL DR. W. H. AURAND

CASE 1.—A ventral hernia. Mrs. K., of twelve years' standing, post-operative, result of operation for pus tubes and appendectomy with drainage.

At operation the omentum was found to be firmly adherent to the old incision, and considerable had to be resected.

The muscles, fascia, and peritoneum were well separated and dissected out, and sutured separately. The patient is making a good recovery.

CASE 2.—Appendectomy. Young woman, aged 20, had had two attacks and operation during interval. Appendix moderately inflamed, removal in usual manner burying stump with purse-string suture of linen. This patient made an uneventful recovery.

DRS. F. A. DUNSMOOR AND JOHN O. TAFT

CASE 1.—Mrs. A. O., aged 71. Patient gives history of prolapse of uterus and inability to empty the bladder, with some vesical tenesmus and a serous discharge from the vagina.

Operation consisted of repair of cystocele. Implantation of senile uterus drawn up through the median incision to abdominal wall. Firm implantation of body of uterus to fascia, thus making posterior splint to the bladder and by tightening of the uterovesical ligaments, obliterating the hernia and sagging of the bladder.

Note.—Patient was able to completely empty the bladder before leaving the hospital, and she was perfectly recovered on the fourteenth day.

CASE 2.—Mrs. J. J. L., aged 35.

Diagnosis, multiple fibroids. The history shows they have grown very rapidly the last five months.

Operation shows that enucleation of tumors impossible without supravaginal amputation, which was accordingly made. Three distinct fibroids, weight between five and six pounds each, removed. Associated with growth on the right side was a cystic growth in the right tube containing inspissated pus. Patient left hospital on the tenth day after the operation.

CASE 3.—C. O., aged 9. History of patient having pus appendix two years ago. Has at the present time a large post-operative hernia. This was closed by the muscle-splitting operation and re-enforced aponeurosis covering.

Patient left the hospital in perfect condition on the tenth day.

CASE 4.—R. N., aged 21. Patient presents left inguinal hernia and undescended testicle. Ordinary incision was made as for hernia. Canal made for testicle, which was placed in the scrotum and fastened by suture to its most dependent portion. Hernia closed by Ferguson operation.

Patient left for home at the end of two weeks.

CASE 5.—A. M., aged 17 months. Congenital right inguinal hernia. Hernia occupies scrotum. In operation there was considerable difficulty in forming separate sac for testicle and maintaining same in scrotum. Closed by Ferguson method. On account of handling and of tight suture, this little patient had an epididymitis for ten days following the operation. Left the hospital apparently completely cured.

CASE 6.—M. E. W., aged 33. Patient had stricture of the urethra, posterior portion. Has neurotic symptoms. Cork-screw stream.

Patient under nitrous oxide gas: introduction of sounds gradually increasing in size until stricture is thoroughly dilated.

CASE 7.—Mrs. C. H. L., aged 28. Patient complains of irritation in anus with tenesmus. Examination shows singularly irritable pedunculated hemorrhoid. Sphincter ani dilated to put muscle at rest and pile excised.

CASE 8.—F. S., aged 40. History of chancre about ten years ago, followed with rash about six weeks later. Chancre was cauterized, and patient given some pills internally. At the present time patient has marked ulceration of both tonsils and half of roof of mouth. Diagnosis was multiple gummata. Novarsenobenzol, dose 6, given intravenously on April 11, to be repeated every five or six days, with the usual internal treatment of mercury and potassium iodide, to be followed later by intramuscular hypodermics of mercury salicylate, grain, 1.5 (in oil).

CASE 9.—Miss A. B. Mucous patches on vulva. Secondary rash over body. Intravenous injection of arsenobenzol, dose 6.

CASE 10.—E. C. Patient was treated for syphilis about two years ago. At that time he received only two treatments of neosalvarsan. Wassermann test now shows strongly positive reaction. Patient given novarsenobenzol, dose 6, intravenously.

CASE 11.—F. A., aged 35. Patient had some trouble in lower right abdomen for over six months. Some sharp attacks of pain which have been diagnosed as appendiceal, and was advised to have an operation made for the removal of the appendix.

Examination shows mass filling right iliac region almost to midline and to the level of the umbilicus. In spite of the fact that the right leg can be used in every direction, a diagnosis was made of psoas abscess, and an incision was made in line of Poupart's ligament external to the peritoneal cavity. Over a litre of pus was evacuated. External incision is now enlarged, and whole cavity is cauterized with carbolic acid. After three minutes, the cavity is filled and thoroughly washed with alcohol. Then the cavity is filled with iodoform gauze.

This patient remained at the hospital three weeks. After the gauze was removed, a tube was inserted, and up to time of discharge there had been no pus connected with wound since operation.

CASE 12.—W. B., aged 21. Patient has had epilepsy constantly since his eighth year, when he had some injury to his head. Examination shows no sign of the injury. Patient has had from six to eight convulsions each twenty-four hours. He has been under treatment constantly since his eighth year by very competent men. The past month he has been under the direction of Dr. A. S. Hamilton, alienist, who advises decompression operation.

The only indication for site of operation was convulsion, usually started in the right hand; and at the time of patient's injury he lost power of speech for a short while, therefore operation was made on the left side. Large horse-shoe incision above left temple, involving one-half of the left wall of the skull. Flap, including skin, temporal muscle, and bone, was turned down over the ear, the dura incised with both vertical and horizontal incisions across entire exposed surface. Brain-tissue was very edematous. In order that the decompression should be complete, the lower half of the segment of bone exposed was removed, leaving simply

the temporal muscle to protect the brain, while the bony part of the flap with integument covering was left to support the upper portion. The wound was closed with catgut sutures.

The patient left the hospital two weeks after operation. There was no suppuration or complication in this case. Patient had one decided convulsion two days before leaving the hospital.

CASE 13.—M. G., aged 21. History of obstructive dysmenorrhea. Increase of severity up to the present time. Under gas the patient is given dilatation of cervix uteri, followed by application of an antiseptic and introduction of a glass uterine-stem.

CASE 14.—L. L. T. Chronic psoriasis. The patient has had this disease for fifteen years, the lesions extending over the head, the entire chest, the back, and both arms. One lesion on chest covers an area five by nine inches. Novarsenobenzol, dose 6, intravenously. Potassium iodide in increasing doses. Internal treatment and ointment chrysarobin.

CASE 15.—L. S., aged 22. History shows that for the skin lesions.

Patient returned sixteen days later with absence of past six months the glands on the left side of neck have been enlarging rather rapidly. No discharge from ear or scalp. Incision just posterior to sternal muscles made, and eight large glands removed, which just filled a pint measure. Glands were apparently tubercular.

CASE 16.—I. J., aged 22. History shows a growth in the lower third of the leg, gradually increasing in size, following an injury to the skin three inches above insertion of tendo Achillis, apparently of the cauliflower type. Diagnosis made of epithelioma, but the microscope pronounced it benign.

CASE 17.—W. F., aged 34, gives history of protruding hemorrhoids. Enucleation made by dilating the sphincter ani, and the enucleation of each hemorrhoid and ligation of pedicle.

CASE 18.—H. B., aged 9, has had hypospadias since birth. Examination shows penis shortened on urethral surface, and shrimp-shaped. There is redundant skin on the dorsal surface of the penis. Wide dissection was made on each side, organ is straightened, and new urethra made to the glans penis, to which it connected.

CASE 19.—E. W., aged 38. For the past five years the patient has had two varicose ulcers on the right leg, two inches above the ankle, and extending three inches up the leg, and two inches in a horizontal direction.

Operation consisted of excision of the ulcer on each side and transplantation by Thiersch skin-grafts taken from the anterior portion of the patient's thigh.

Two weeks later: perfect result; all grafts remaining in position and forming union without suppuration.

CASE 20.—Mrs. H. Psoriasis. Novarsenobenzol, dose 6, intravenously. Potassium iodide internally. Chrysarobin ointment externally.

CASE 21.—H. E. P., aged 39. Previous history, uneventful except extensive laceration of cervix and perineum at confinement five years previously.

Operation consisted in repair of lacerations in cervix and perineum.

CASE 22.—A. P., aged 8. Patient gives history of large tonsils and adenoids, mouth-breathing, etc. Demonstration of improved technic by Dr. J. S. Reynolds, who removed both tonsils and adenoids.

CASE 23.—W. C. M., aged 31, has been suffering four years. Constant pain three days before menstrual flow

and until flow is well established. Examination shows stenosis of internal os.

Operation under gas consisting of dilatation of cervical canal, application of an antiseptic to the cervix and uterus, and introduction of a glass uterine-stem, suspended by forty-day catgut sutures.

CASE 24.—R. B. Patient has secondary rash over the body; mucous patches on the tongue and both tonsils. Wassermann strongly positive. Novarsenobenzol, dose 6.

CASE 25.—Mrs. A. C., aged 47, has history of onset in January, 1918. Inability to pass urine without catheterization. Not a great deal of pain or bleeding, but very large mass occupying the entire vaginal tract and pushing of vulva outward. Only a serous discharge through the vagina present. There is a large mass presenting also above the brim of the true pelvis.

Under ether an attempt was made to remove what was apparently submucous fibroid, but microscopical section showed this to be a carcinoma. With a spoon-saw a part was separated, and the vagina emptied. The uterine cavity was thoroughly curetted, cauterized, and packed with iodoform gauze. The patient returned home twelve days after operation able to urinate perfectly, but with no possibility of cure in the case.

CASE 26.—Miss S., aged 18, has a ranula of four years' duration on the left lower jaw between the first and the second molar. Removal under local anesthesia. Cauterized, and advised if there is any recurrence within three months, two teeth to be extracted and alveolar process of inferior maxilla to be removed.

CASE 27.—N. F., aged 28. History: pain in region of uterus, increase in amount of menstrual flow, fatigue, and bearing-down sensation.

Diagnosis, multiple fibroids of uterus.

Under ether, myomectomy was made. Patient being unmarried, great care was taken, and enucleation made so that function of uterus is safe. Tonsils and adenoids removed.

CASE 28.—A. H., aged 31, has history of appendectomy and retroversion with premenstrual pain. Ordinary operation made for appendectomy, cervix dilated, curettage and glass uterine-stem introduced. Gilliam: operation to repair prolapse. One hemorrhoid excised.

CASE 29.—P. M., aged 30, had post-partum infection. Temperature, 105°; pulse, 168, with boggy cul-de-sac. Post-vaginal section made; introduction of drainage-tube. Application of iodine to endometrium.

CASE 30.—L. H. G., aged 36, male. History of having right epididymitis removed two years ago for tuberculosis. Examination shows disease has appeared now in left epididymitis, which is removed under ether anesthesia.

CASE 31.—L. M., gave history of chancre five months ago, followed by secondary rash. Came in for treatment about a month ago with ulceration about the size of palm of hand over pubis, extending up into the right inguinal hernia.

Novarsenobenzol, dose 6, to be given every seven days. The usual mercury and potassium-iodide treatment internally, also mercury salicylate in oil given intramuscularly every seven days by hypodermic.

DR. ROBERT EMMETT FARR

SURGICAL OPERATIONS PERFORMED

CASE 1.—Mrs. D., aged 76, widow.

History: Thyroidectomy under local anesthesia six years ago. Mobilization of transverse and descending

colon for dense fibrinous adhesions eight months ago, with complete relief for five months.

Present trouble: Past three months almost complete obstruction at splenic flexure (confirmed by x-rays).

Operation: Excision of half of the transverse, and two-thirds of the descending, colon. Lateral anastomosis under local anesthesia. Patient sitting up eleven days later.

CASE 2.—L. D., aged 51, physician, married. Complaints of melena, painful stools, external hemorrhoids. Condition has existed for ten years; for one and one-half years has had bleeding; slight prostatic irritation. Cystoscopic and urethroscopic examination negative.

Operation: Divulsion of sphincter; excision of ulcerated area, and suture with chromic gut; clamp and cautery treatment of piles under local anesthesia. Left hospital two days later.

CASE 3.—J. H. S., aged 82, physician, married.

History: Nine months ago excision of glands in epitrochlear region of right arm.

Present trouble: Swelling in right axilla for three months. Painful, palpable masses fixed in region of axillary vessels.

Operation: Excision, under local anesthesia, by making complete dissection of the axilla, including a small portion of the pectoralis major and latissimus dorsi muscles to which it was adherent.

Pathologic report: Tuberculosis.

Patient left hospital in forty-eight hours.

CASE 4.—Miss B. G., aged 16.

History: Tonsillectomy ten weeks ago. Right side of neck enlarged for past three months. Examination showed large, tender, movable glands in all triangles of the neck on right side. Wassermann, negative. Temperature, 100°. No result from potassium-iodide medication.

Operation: Complete dissection of all cervical triangles under local anesthesia. One gland found to be suppurating. Iodoform-gauze drainage.

Patient was sitting up on sixth day.

CASE 5.—Miss R. R., aged 23.

History: Enlargement of the thyroid gland, especially on the right side, for two years. Pressure-symptoms only.

Operation: Thyroidectomy under local anesthesia.

Patient left hospital on the sixth day.

CASE 6.—A. G., male, aged 5. Cleft-palate.

Operation: Mobilization of soft issues of palate, freshening and closure with chromicized gut under ether anesthesia. Patient left hospital on the fifth day.

CASE 7.—E. M., male, aged 40, single, painter. Ten months ago fell from ladder, fracturing bones in the elbow-joint. Open operation two weeks later.

Present condition: Fixation of the elbow at a right angle; pronation and supination lost. Radiograph shows large mass of bone anterior to the elbow-joint, and displacement or fracture of the upper end of the radius.

Operation: Arthroplasty under brachial anesthesia.

Patient left the hospital in one week.

CASE 8.—Miss B. T., aged 12, student. Fracture of left humerus eight months ago.

Present condition: Tumor three inches above the lower end of the ulna 1.5 inches in diameter, round, smooth, and painless. Radiograph shows the tumor probably to be osteoma.

Operation: Incision between flexors and extensors.

Pronator quadratus clipped; tumor removed with curved chisel. Transverse blocking with novocain three inches above the incision.

Patient left the hospital on fifth day.

CASE 9.—M. R., aged 15 months, female. Macro-pedia.

History: Since birth the second and third toes of the right foot have grown more rapidly than normally. The whole of the anterior surface of the foot is enlarged and has become cumbersome. Right leg also somewhat larger than the left.

Radiographic findings: Negative; child otherwise healthy.

Operation: Excision of second and third toes with second and third metatarsals and considerable amount of tissue composing the sole of the foot.

Anesthesia: Novocain blocking above the line of incision.

CASE 10.—Mrs. B. L. V., aged 53, housewife, eleven children. Health always good.

Present complaint: Swelling in both inguinal regions for some years. Much pain on right side. Examination shows double oblique inguinal hernia.

Operation: Both sacs were found to contain omentum, the right side being incarcerated and containing a portion of the cecum. Round ligaments divided, and Ferguson operation performed under local anesthesia.

CASE 11.—A. M., male, aged 19, bookkeeper, single. Has had three attacks of acute appendicitis. Comes in during the interval for operation. Transverse McBurney incision. Negative intra-abdominal pressure and vertical retraction. Adherent appendix novocainized, and adhesions cut. Appendix removed with cautery under local anesthesia; linen purse-string suture.

CASE 12.—Miss A. S., aged 28, nurse.

History: Has had eight laparotomies for tuberculous peritonitis and obstruction of the bowels.

Operation: Radiographs show loops of dilated obstructive ileum in right upper abdomen. Transverse incision; dense adhesions divided; dilated ileum resected; abdomen closed without drainage.

Operation done under local anesthesia.

CASE 13.—Mrs. A. F., aged 30, housewife, three children.

History: Enlarged thyroid for two years; shortness of breath; palpitation and extreme nervousness associated with tremor; stomach and bowel disturbance for last few months; von Graefe's sign present; pulse, 120 on entering hospital five days ago, but under perfect rest, ice-cap, and tincture of belladonna the pulse came down to 85. The patient was given a fake hypodermic each morning; and on the day of operation was given 1/200 of scopolamin and 1/3 of pantopon at daybreak. This was repeated one-half hour before operation. The patient was moved to the operating-room on automatic lifter, and then learned for the first time that she was to have an operation. Four poles were ligated, and a portion of each gland was removed. New gland reconstructed in the center. Lateral drainage. Operation was done under novocain anesthesia.

CASE 14.—D. P., female, aged 9. Left tuberculous coxa vara. Application of plaster cast with demonstration of radiographic and clinical findings.

CASE 15.—B. V., male, aged 27, single, farmer. Double oblique inguinal hernia. Bassini operation done on both sides under local anesthesia.

(Reports continued in next issue)

DR. ROBERT EMMETT FARR

DEMONSTRATION OF CLINICAL CASES

CASE 1.—M. A., male, aged 15. (Post-operative.) Complete cleft-palate closed by Brophy method under local anesthesia.

CASE 2.—J. T., male, aged 65. Prostatectomy three weeks ago under local anesthesia and parasacral blocking.

CASE 3.—O. L., female, aged 40, housewife. Operated on on March 28. Amputation of cervix, repair of perineum, curettage, appendectomy, and suspension of uterus under local anesthesia.

CASE 4.—H. H. N., male, aged 27, machinist, single. (Pre-operative.) Large necrotic area over the right knee due to a burn. Being prepared for plastic operation. Excision of necrotic tissue. Open air and sunlight to wound.

CASE 5.—Mrs. M. C. G., aged 24, housewife. (Pre-operative.) Acute toxic goiter. Being prepared for operation. Perfect rest; tincture of belladonna; ice-bag over heart; fake hypodermic each morning. Patient operated on on April 15; now convalescent.

CASE 6.—O. C. G., male, aged 56, married. (Post-operative.) Several attacks acute appendicitis. Last few months has had stomach trouble, added to the intestinal symptoms formerly complained of. Radiographic findings, negative. Laboratory findings: No free HCl; combined, 30; lactic, plus; Boas-Oppler bacillus, plus; blood, plus. Operated on on March 22. Pylorotomy for polypus at pyloric ring, and appendectomy for adherent appendix under local anesthesia.

CASE 7.—D. T. W., male, aged 63, married. (Post-operative.) Operated on on March 23. Suprapubic prostatectomy under parasacral blocking and suprapubic infiltration.

CASE 8.—F. V., male, aged 53, single. Operated on on January 16 for ununited fracture of the neck of the femur under parasacral anesthesia with local infiltration. Freshening the edges and pegging with beef-bone pegs. The patient is now about on splints. Shows but slight disposition to formation of callus.

CASE 9.—Mrs. T. S., aged 38, housewife. Operated on on March 25, 1918. Double salpingectomy, suspension of uterus. Patient now sitting up and ready to leave hospital. Work done under local anesthesia.

CASE 10.—L. B., male, aged 49, plumber. In September, 1917, sustained severe burn of both legs from the knees down. Treated by the open-air and sunlight method. The left leg completely healed; the right leg, had three pieces of denuded bone presenting; the shreds of bone were removed, and beneath them was found healthy granulation-tissue. One piece of bone of elevated tibial surface was six inches long by two inches wide. Thiersch skin-grafts were applied. All the wounds now completely covered, and the patient is ready to leave the hospital. Grafting was done under local anesthesia.

CASE 11.—H. M., male, aged 55, married, telephone man. Double hydrocele for three years. Operated on on March 25, 1918. Total excision of both sacs under local anesthesia. Patient is now ready to leave the hospital.

CASE 12.—L. H., female, aged 6. Operated on August 8, 1917. Closure of complete cleft-palate. Perfect result. On August 18 a plastic operation was done on the lip to overcome "fish-mouth."

DR. H. McI. MORTON

The clinic was a demonstration of the advantage of early orthoptric treatment of strabismus. Cases were shown illustrating the value of properly fitted glasses in conjunction with stimulation of the fusion-sense, and that, in a great many cases of young patients up to five or six years of age, binocular vision could be established with parallelism of the visual axes without operation.

The means employed were the use of an ordinary stereoscope with either prepared cards or those of Knoll, or the use of the Worth amblioscope. The value of the Worth amblioscope and the method of its use were demonstrated. After failure of these means to straighten the eye, a demonstration in three cases of an operation for advancement without tenotomy of the opposing muscle. This is done by the complete dissection of the muscle and tendon and the fastening of the end of the tendon to the sclera by silk sutures firmly embedded in the sclera itself. This method has proven more satisfactory than the substitutes of tendon-tucking and resection.

There was an operation for trachoma using the Knapp's forceps for the expression of the granulation masses.

DR. WM. R. MURRAY

Tonsillectomies under local and general anaesthesia.

DR. JAMES S. REYNOLDS

CASE 1.—G. W., aged 12. Anterior staphyloma of left eye; traumatic; eyeball hard; irritable; pain; no vision. Enucleation with fat transplant from abdominal wall to fill orbit. Complete healing. Prosthesis, reformed, fitted.

CASE 2.—Mr. C., aged 32. Cough, hoarseness, difficult speech for past two years. Tumor on anterior third right vocal cord. Removed by direct method. Allyn's pharyngoscope. Diagnosis, fibroma.

CASE 3.—Mr. S., aged 46. Chronic tonsils; local cocaine anaesthesia. Sharp dissection-enucleation.

CASE 4.—Miss B., aged 20. Chronic tonsils. Dull dissection and snare enucleation under general anaesthesia.

CASE 5.—John R., aged 6. Hypertrophied tonsils and adenoids. Sluder dissection and La Force adenectomy under general anaesthesia.

DR. J. F. SCHEFCIK

CASE 1.—Congenital concomitant strabismus: Extreme convergence, with right hyperphoria. Patient, female, aged 18. Parents are first cousins. Patient has had chorea for several years, and has little use of right arm.

Operation: Complete tenotomy of left internal rectus, retained by stitches until attached. Two weeks later, advancement of right external rectus, tucking operation. On account of extreme convergence in this case, a double tenotomy was justified, controlled by sutures.

CASE 2.—Radical mastoid operation. Patient, male, aged 42, with a history of chronic otorrhea of eleven years' standing. Acute exacerbations, accompanied by pain, for some months. The usual radical operation was done, with destruction of membrane in the Eustachian tube. A Seibenmann flap was used in the plastic

part of the operation. Three weeks after operation the wound is healed, and the patient is doing well.

CASE 3.—Recurrent mastoiditis. Patient, female, aged 6, was operated on for acute mastoiditis by a surgeon in a small town. No complete operation was done at the time, but simple drainage of antrum was made. After three weeks a purulent discharge began, which continued for six months or more. Upon reopening the mastoid, it was found to be completely infected. A complete mastoid operation was done, and the wound closed with a tube-drain left in place five days. After this was removed, the wound closed and the patient was discharged ten days after operation.

DR. J. P. SCHNEIDER

Alice P., aged 13. Diagnosis: Acquired hemolytic icterus. History: P. C., weakness, vomiting, epistaxis; F. H., no other member of family jaundiced; P. H., normal and well until two years ago, when she became jaundiced, tired, and gradually developed food-distress and distention. One year ago, and off and on since, there has been epistaxis. Occasional vomiting and a deeper jaundice for a few days. Itching skin.

P. I.: For the past three months greater weakness and more distress in left hypochondrium.

Physical examination: well-nourished, icteric; pityriasis-like skin, showing, however, thickening in ridges, due to scratching; no purpura; liver, palpable; spleen, a hand's-breadth below the costal margin, 18 cm. long.

Blood findings: Hg., 49 per cent, Sahli. R. B. C., 2,904,000; W. B. C., 4,500; Morph.: Anisocytosis, esp. microcytosis marked, slight poikilocytosis, no nucleated reds or polychromasia seen. Resistance test: complete hemolysis at .36.

Urine: Sp. Gr., 1.022. Color, brown. Acid. Albumin, 0; Sugar, 0. Urobilinogen, Urobilin.

Duodenal findings: Amount removed, 50 c.c. Color, dark-yellow. Bilirubin, x. Urobilin, 6,800 units. Urobilinogen, 0.

Splenectomy was successfully carried out on April 10, 1918; the spleen weighed 950 grammes.

April 19, 1918, or 8 days after operation: urine, free from urobilin and urobilinogen.

April 25, 1918:

Blood-findings: Hg., 58 per cent; R. B. C., 3,975,000; W. B. C., 12,000; slight anisocytosis and poikilocytosis.

Duodenal contents: 50 c.c.; light-yellow; bilirubin, x; urobilinogen, 0; urobilin, 1,200 (normal).

Conclusion: Splenectomy totally and permanently ablates the causative factor, namely, pure hypersplenism. The operative literature demonstrates the complete and lasting recovery of all cases of this disease of the Hayem-Widal type. This little patient will be not only tentatively but permanently well.

DR. SAMUEL C. SCHMITT

CASE 1.—Mrs. J. C., aged 34. Hyperthyroidism. Prominent symptoms: tachycardia, tremor, general hyperaesthesia, insomnia. Internal medication failed to give any benefit. Operation on April 11, and three-fourths of gland was removed. Considerable portion of gland contained calcified deposits. Parenchymatous hypertrophy. Patient left hospital April 18, very much improved.

CASE 2.—Mrs. W. H. Tumor of left breast. Had small tumor removed from this breast three years ago

in New York City. At present tumor seems to involve the entire gland. No enlarged glands in axilla. Operation April 11. Frozen section under microscope showed tumor to be adenofibroma. Amputation of entire breast.

At the date of this report the patient has made an uneventful recovery.

CASE 3.—Mrs. D. W. L. Lacerated cervix, lacerated perineum, cystocele, prolapsus uteri. Patient has also had one or two attacks of appendicitis (?). Operation April 12: Curettage, trachelorrhaphy, perineorrhaphy. Stitching round ligaments together and to the anterior surface of the uterus for correction of retro-displacement. Resection of Fallopian tubes; appendectomy.

One week after operation, patient is making an uneventful recovery.

ST. MARY'S HOSPITAL

DR. C. P. NELSON

CASE 1.—Female, aged 28. Brain tumor at the base of the brain accompanied by increasing double optic neuritis and oncoming blindness with headaches, uncertainty of gait and station. A decompression was done on the right side under the temporal muscle on March 25, and a left subtemporal decompression was done at the clinic. The object of the operations is to prevent total blindness.

DR. H. B. SWEETSER

CASE 1.—Miss W., aged 47 years, single, white.

Disease: large nodulated fibroid uterus, pressing on rectum. Operation: transverse suprapubic incision of both fascia and muscles. Panhysterectomy.

CASE 2.—Mrs. G., aged 20, married, nullipara. Disease, exophthalmic goiter. Exophthalmos marked; tachycardia.

Operation under ether anesthesia; usual incision; removed right lobe and isthmus; ligated left superior pole; excised convexity of left lobe; small rubber drain inserted; ice-cap over cardiac region.

Note.—At the end of one month recovery followed in each case without complications.

DR. E. OSWALD VOYER

CASE 1.—Miss H. Post-operative adhesions. The symptoms before operation were drawing pains in abdomen and general tired feeling. Operation showed the omentum adherent to the uterus; also bladder, tube, and ovary on left side adherent. Appendectomy stump showed linen thread intact. This was removed.

CASE 2.—Mrs. D. Cholecystectomy. The usual gall-bladder symptoms were present before operation. At operation a large gall-stone ulcerated through the gall-bladder wall into the duodenum; extensive adhesions. Cholecystectomy. Duodenum repaired and appendectomy done.

SWEDISH HOSPITAL

DR. F. L. ADAIR

1. Vaginal myomectomy.
2. Plastic operation for hymenal stenosis.

DR. ARTHUR E. BENJAMIN

CASE 1.—Mrs. A. B., aged 51, farmer's wife, with good habits and good family history. Is rather thin.

Hemoglobin, 85 per cent, and leucocyte count, 7,200. Has been in good health except for extreme constipation for a number of years, and has had attacks of pain in the abdomen and vomiting, the last attack being six weeks ago. Menstrual history, normal. Four children; difficult labor. Had acute attack of pain in the right side on January 26, 1918; obstipation; abdomen greatly distended and tender, her symptoms lasting over a week. Pain has persisted on the right side in the region of the appendix.

Examination reveals an enlarged right lobe of the thyroid, abdomen somewhat distended, pain upon pressure over the cecum and appendix. Some prolapse of the stomach and transverse colon. Retroversion of the uterus.

Operation under gas and ether anesthesia: Suprapubic incision is made, and the transverse and ascending colon are bunched in the right pelvis. The hepatic flexure is pulled down. The appendix, which is long, is dilated and adherent. A membranous pericolicitis exists along the cecum and over the ascending colon, causing the bunched appearance. The constricting fibers of this membrane are severed, allowing the colon to assume a more nearly normal position. A modified Gilliam is then performed for the retrodisplaced uterus, which operation I have performed for years with perfect satisfaction.

The diseased thyroid will be removed later under local anesthesia.

CASE 2.—Mrs. A. J., aged 35, married. Family history, good. Fairly good general health, but painful menstrual periods. Operated on in December, 1916, at another hospital. Right tube and ovary resected, and a Gilliam operation performed. For the last three months she has had considerable pelvic pain with involvement of the left tube. Uterus somewhat fixed. Temperature ranging between 100° and 101°; now normal. Leucocyte count, normal at present. Under gas and ether anesthesia, a suprapubic incision is made. The left tube and remaining portion of the right are found adherent, as well as both ovaries, pulling the uterus backward and downward somewhat. Both tubes are now removed, including a portion of the horn of the uterus. The appendix, which is small, but showing signs of disease at its tip, is removed.

CASE 3.—Miss H. F., aged 25. Good habits. General appearance of good health now. Mother died of apoplexy. Four brothers and sister died of diphtheria, and one of spinal meningitis. Had tubercular disease (suppurative) of the right hip fifteen years ago, resulting in a somewhat shortened limb (shoe has to be elevated). She formerly complained of headache, dysmenorrhea, considerable gastric and intestinal distress, and is weak, thin, and bad color.

A diagnosis of tubercular peritonitis, previous to operation, was made three years ago by an internist.

Temperature, normal, as well as leucocytes. Operation was done in November, 1915, for a diseased appendix. A pronounced form of membranous pericolicitis existed, especially below the hepatic flexure. Omentum was adherent to the ascending colon, which was turned outward and twisted. Cecum greatly dilated. Small intestine was dilated, the intestinal wall being very much thinned out from chronic distention. The ileocecal valve was incompetent, owing to the back pressure because of adhesions around the ascending colon. All the constricting bands were severed, allowing the

bowels to assume their natural position. A modified Gilliam operation was performed, owing to the displacement.

At the present time she is apparently well. She has good color, has gained about twenty-five pounds in flesh, the abdomen has lost its tenderness, the bowels are more regular, and there is no distention. A special diet has been given her. Exercise and bowel flushing for a colitis which existed, have been used occasionally. Her rundown, weakened condition, as well as her suffering, has been relieved.

DR. CHARLES R. DRAKE

Frozen tissue diagnosis; Wassermann technic; routine laboratory procedures.

DR. E. H. PARKER

Intranasal operation for chronic maxillary antrum. Three tonsillectomies.

DR. SOREN P. REES

A medical clinic illustrating the management of chronic heart-lesions in *private* practice with emphasis on the prognosis and the physician's responsibility to the patient.

The following points were emphasized:

1. The difference between the usual treatment of public-hospital cases and those occurring in private practice was pointed out. The former fulfills literally the old text-book advice that, while compensation is adequate, no treatment is indicated. In private practice the break-down should be anticipated many years before it occurs.

2. Hypertrophy of the heart-muscle means an old heart, functionally.

3. Treatment must include finding and removing, when possible, the source of infection, a long rest to recover the normal balance, and a definite outline regulating the physical and social life of the patient for the remainder of life.

CASE 1.—Elsie A., aged 10, under observation five years, illustrates the recuperative power of young tissue when given a chance. Tonsillectomy and a strict regulation of diet, play, sleep, and school-work have restored a dilated heart to good health. The mother understands now that her child's future is limited as to work, amusements, marriage, and home duties.

CASE 2.—Janet N., aged 15, under observation for seven years, illustrates what a similar routine has done for her, more slowly, however, because of older tissues. A mitral regurgitation following measles has been stripped of its symptoms by prolonged rest and a definite program for daily living.

CASE 3.—Mrs. F. H., aged 25, illustrates a chronic endocarditis (double mitral) becoming serious because of a pregnancy. She was allowed to nurse and care for her baby and to care for her home without taking into account the heart defect. Three months of complete rest in bed has restored her to health, and a very limited program for the future aims to preserve that health.

CASE 4.—Hannah S., aged 33, single, a waitress, with a double mitral, a dilated heart, and marked pulmonary congestion, illustrates a grave condition produced by lack of proper treatment, her greater age, nature of her

work, and her inability to adjust her life to her needs.

CASE 5.—Mrs. Bernatta K., aged 28, mother of five children, illustrates the depleted condition caused by a chronic endocarditis and myocarditis when aggravated by frequent pregnancies and surgical operations on the pelvic organs undertaken to restore her health. Absolute rest, tonsillectomy, and blood-tonics have given marked improvement.

CASE 6.—Mrs. J. L. W., aged 45, with a systolic blood-pressure of 220 accompanied by cardiac distress and anemia, has normal urine and no specific infection. The condition is due to prolonged physical hardship and chronic tonsillar infections. Tonsillectomy, hydrotherapy, prolonged rest, and special diet have caused marked improvement.

CASES 7, 8, and 9, illustrated tachycardia, extreme heart-failure with general dropsy, and subacute endocarditis with active articular rheumatism.

The fluoroscopic picture and x-ray plate were used to further amplify the physical findings.

CONCLUSIONS

1. The prognosis depends largely upon the nature and site of the lesion, the condition of the heart-muscle as shown by the heart's rhythm and reserve force, the condition of the other important viscera (arteries, kidneys, lungs, and liver), the cause of the immediate breakdown,—can it be removed?—and the age, sex, and social status of the patient.

2. The treatment is essentially rest and a long look ahead, with specific instruction to guide the patient for the future.

DR. C. J. RINGNELL

CASE 1.—O., aged 17, female. Appendectomy; subacute condition; bound down by veil of adhesions.

CASE 2.—M., aged 46, female. Amputation of right breast; active adenocarcinoma found in nodule removed from near nipple. Axillary fat, fascia, and glands removed, also costal portion of pectoralis major muscle. No carcinoma demonstrated in axillary glands.

CASE 3.—N., aged 50, female. Hemorrhoidectomy. Clamp and Paquin cautery.

CASE 4.—B., aged 31, female. Cholecystectomy. Cholelithiasis for several years; passed a number of stones. Gall-bladder enlarged; cystic duct dilated; many small stones.

CASE 5.—C., aged 43. Abdominal hysterectomy; large fibroid of uterus; left ovary and tube removed. Appendectomy; chronic. Repair of small umbilical hernia.

CASE 6.—T., aged 51. Appendectomy; subacute; perineorrhaphy.

CASE 7.—J., aged 50. Hysterectomy and appendectomy. Uterus uniformly enlarged; soft fibroid. Chronic appendix.

CASE 8.—D., aged 25, male. Appendectomy and adenoidectomy. Appendix subacutely inflamed, and bound down with adhesions.

CASE 9.—M., aged 37. Double varicocele and circumcision.

CASE 10.—O., aged 4 months. Circumcision.

DR. JOHN H. RISHMILLER

Dr. Rishmiller gave a fracture clinic and demonstrated Freeman's external bone-clamp for fracture of the tibia and the fibula on a Hawley table. He laid par-

ticular emphasis on preserving the natural bowing of the tibia, and that it was better to over-correct than to under-correct, in order to get away from traumatic flat-foot as far as possible. He emphasized that Lane's steel plate is absolutely contra-indicated in fractures of the lower half of the tibia, as the blood supply is very poor, and, consequently, the application of a plate is liable to be followed, first, by suppuration and, second, by non-union. The suppuration or the non-union is not directly due to the application of the steel plate, but is directly due to the limited blood supply to this part of the osseous system. He also called attention to the fact that the surgeon must decide for himself, for instance, in fractures of the humerus or the femur, by what method, through practical experience, he can obtain the best end-results—good function and the shortest time of disability—whether he uses the inlay bone-graft, the medullary bone-graft peg, or Lane's steel plate.

He showed a rare case with pathologic fracture of the femur and the tibia, due to osseous cysts and giant-cell sarcoma, with metastasis in all the bones of the body, with demonstration of radiographs involving practically the whole osseous system.

Radiographs, with the patient, were shown where a fracture of the vertebral arch of the second cervical vertebra had been sustained where symptoms were due to the fracture impinging on the posterior root nerves.

End-results were demonstrated of fracture of the lower end of the radius and the ulna, stating that all cases should be reduced under ether and not gas anesthesia, and studied subsequently by x-rays, at frequent intervals, to note whether complete reduction is maintained and functional impairment avoided.

DR. J. P. SCHNEIDER

Two cases of glomerulonephritis:

CASE 1.—Mr. S. Glomerulonephritis of second stage, illustrating the fallacy of tonsillectomy at the onset of this type of nephritis as against focal nephritis. Value of knowing functional incapacity and direction of same. Here salt and nitrogen both were retained.

Treatment, based on this knowledge, namely, salt-free and nitrogen limited to 50 gm. per day diet, proved very efficient. Blood and urea values of 31.12 on 2-18-18 came down to 18.0 on 3-25-18 with a corresponding fall of blood-pressure from 152-94 to 120-88.

CASE 2.—Miss S. Diffuse glomerulonephritis of first stage. Fulminating type of onset with violent symptoms of uremia of one week's duration. This on 7-7-17. Same apparently precipitated by sweat-packs. After control of these by the usual methods plus nitrogen-free diet, control of retention of nitrogen and salt (edema very extensive and extreme albuminuric retinitis) was obtained by rigid diet. On 12-2-17 urea nitrogen 40.0 mg. per 100 c.c. Creatinine, 3.5. On 3-25-18 urea nitrogen, 30.0, and creatinine, 3.0. Still today (4-10-18) there are considerable retention of nitrogen and very little of salt, and the blood-pressure is normal (at onset 190-110). The heart is of normal size. Still there are considerable anemia, much albumin, and epithelial and granular casts.

This case illustrates the fulminating type.

DR. DOUGLAS WOOD

CASE 1.—C. S., aged 39. History of repeated attacks of iridocyclitis in each eye. Pupils occluded with

secondary cataracts. Has had rheumatism, tonsillitis, ulcerated teeth; all devitalized abscessed teeth and tonsils removed.

Operation: Iridectomy, making artificial pupil.

CASE 2.—G. W., aged 5. History of colds, tonsillitis, croup, mouth-breathing, enlarged glands, hypertrophied tonsils, and adenoids.

Operation: Enucleated by blunt dissection.

UNIVERSITY HOSPITAL AND DISPENSARY

DR. E. T. BELL

The following is a brief abstract of a paper on bone-sarcoma presented by Dr. Bell.

Discussion of the pathology and clinical course of (1) giant-cell sarcoma; (2) less malignant sarcoma; (3) more malignant sarcoma of the bone.

Methods of diagnosis of these tumors by x-ray and by exploratory incision were discussed. Lantern demonstrations of the gross and microscopic pathology of the three varieties of bone-sarcoma were given.

DR. E. D. BROWN

Demonstration of the production of traumatic shock:

An anesthetized rabbit, which was prepared for taking a blood-pressure tracing by introducing a cannula into the carotid artery, was subjected to a crushing blow on the hind leg in close proximity to the body.

The result was an almost instantaneous and pronounced fall in blood-pressure, which may, or may not, return to near the normal. In some previous experiments death has resulted within ten minutes after the injury. Manipulation of such an injured leg causes an immediate fall in blood-pressure, thus demonstrating the necessity of handling an injured patient gently in order to avoid a greater degree of shock.

DR. CHARLES R. DRAKE

Clinic at the University Dispensary: Various types of nephritis.

Hypertension and cardiac lesions.

Chronic arthritis.

DR. A. S. HAMILTON

On April 11, he exhibited a case of pernicious anemia with spinal-cord changes and marked sensory and reflex disturbances. Microscopic sections were exhibited, illustrating the peculiar disassociation of sensation, which is so characteristic of the spinal-cord phenomena in pernicious anemia.

On Friday, April 12, in conjunction with the operative clinic of Dr. A. C. Strachauer, Dr. Hamilton gave a talk on the clinical features of two cases of brain tumor submitted to operation and exhibited an extramedullary tumor of the spinal cord, a tumor of the right cerebellum in a child, and a cyst of the right cerebellar hemisphere in an adult.

DR. OLGA S. HANSEN

Arrhythmia. Auricular fibrillation. One case in fibrillation. Two cases formerly fibrillating, now regular. Demonstration of conducting mechanism of heart (Dr. Erdmann). Demonstration of electrocardiographic tracings.

Demonstration of cardiac cases with fluoroscope (Dr. Bissell): (1) mitral regurgitation with fibrillation; (2) aortic regurgitation with rheumatic history, compensated; (3) aortic aneurysm in arteriosclerosis with non-luetic history.

Demonstration of cardiac cases with fluoroscopic examination (Dr. Bissell): (1) aortic regurgitation and mitral stenosis, with luetic history; (2) double mitral lesion; (3) double aortic lesion with luetic etiology.

Cardiac Clinic at University Dispensary: (1) case of aortic regurgitation and double mitral disease, with rheumatic etiology; (2) slow auricular fibrillation—arteriosclerosis, myocarditis, no valvular disease; (3) rapid auricular fibrillation in patient with mitral regurgitation and stenosis; (4) demonstration of tracings.

DR. E. J. HUENEKENS

Clinic on intubation: Indications for intubation. Demonstration of intubation on an anesthetized dog. The physicians attending the clinic spent the remainder of the hour practicing intubation on the dog.

Clinic on spasmophilia and neurosis in infants:

CASE 1.—Spasmophilia in a nine-year-old girl who had had convulsions almost daily from the age of four to nine years. The convulsions stopped abruptly on the administration of phosphorus and cod-liver oil, large doses of calcium, and proper diet. The child has not had one convulsion since,—a period of seven months.

CASE 2.—Spasmophilia in an infant who had had numerous convulsions for two weeks previous, with definite signs of rickets present and a markedly positive electrical reaction. The baby was shown two days after the beginning of treatment, had had no further convulsions, slept all night, and the electrical reactions were down nearly to normal.

CASES 3, 4, 5.—Three cases of neurosis in infants. The first child, twenty-one months old, had had persistent vomiting since birth. The second, fifteen months old, had marked choking at every attempt at eating. The third, a case of extreme anorexia for the past fourteen months with marked emaciation.

In all three cases repeated physical examination and all laboratory tests failed to reveal any organic lesions. Treatment in all cases consisted in segregation from the neurotic mothers under the care of an expert nurse. Complete cure in the three cases, with marked improvement from the first day of beginning of treatment.

CASE 4.—Megacolon in a six-year-old boy with intense obstipation. Complete functional cure followed abdominal massage and strict attention to diet.

Clinic on infant-feeding:

Demonstration of fifteen feeding cases of ambulatory type, ranging from the simple regulation of breast-feeding to the more difficult cases of artificial feeding, with complete diet-list for normal children. Demonstration of rickets, in all stages. Demonstration of umbilical and inguinal hernias in infants, and demonstration of simple treatment.

DR. C. M. JACKSON AND STAFF

Demonstrations in Anatomy, Histology and Embryology, at the Institute of Anatomy, University of Minnesota. Models and specimens were shown. Of special interest was an exhibit from the collection of human

embryos, which have been contributed by the physicians of the state. The methods were demonstrated by which the embryos are collected, preserved, catalogued (with clinical histories), and prepared for study.

DR. WM. R. MURRAY

Senile cataract of left eye, combined extraction, irrigation anterior chamber, clear black pupil, no complications.

Senile cataract of right eye, hypermature, lens soft, expulsion of lens on completion of corneal incision, no loss of vitreous, replaced iris, simple extraction.

Ectropion lower eyelid following Morax-Axenfeld conjunctivitis. Inserted Snellen sutures, temporary over-correction.

DR. EARL A. LOOMIS

The clinics given to refraction work during Clinic Week were attended by several doctors from outside of the city, the majority of whom were general practitioners who have taken up refraction as a side-line. We endeavored to show our methods and the most interesting types of refractive errors. By the number of questions asked I feel the work was interesting and helpful to all.

DR. J. P. SCHNEIDER

Two cases of hypertension:

CASE 1.—Mrs. W. Hypertension the presenting finding—differential diagnosis—need of study of functions of glands of internal secretion of metabolism, of circulation and elimination.

With the blood-pressure reading of 190-100, of normal kidney-function as measured by the P. S. P., urea nitrogen and creatinine tests giving no history of acute nephritis, scarlet fever, pneumonia, or typhoid in the past, we conclude the same to be benign hypertension, and we expect good result with mental and physical rest, a low-caloric diet, and the use of vascular sedatives.

CASE 2.—Mrs. H. Malignant hypertension due to and associated with the third-stage glomerulonephritis. For two years this patient has been carefully followed, and numberless urine and blood examinations made, and only during the past few months is it definitely certain that the hypertension is malignant, bearing out the value of a good history, the patient having passed through a virulent scarlet-fever infection at the age of 9.

At the present time the headache and nausea phenomena are increasing, there are retention symptoms, and her urea and creatinine values are mounting each month. Only partial control is possible through a low-protein diet, for in a chronic condition it is inadvisable to under-proteinize for a long period of time. Prognosis is not good, for the ensuing months will see uremia supervene.

DR. G. ELMER STROUT

Diagnostic clinic in ophthalmology in Out-Patient Clinic.

(Continued Next Issue)

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
H. J. ROWE, M. D. - - - Casselton, N. D.
H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

MAY 15, 1918

MINNEAPOLIS CLINIC WEEK A PERMANENT ORGANIZATION

A meeting of the Executive Committee of the Minneapolis Clinical Section of Hennepin County Medical Society, which took place a few days ago, made what was a temporary organization a permanent one with the same executive committee that planned the work of the Minneapolis Clinic Week.

All clinicians realize that Clinic Week can be materially improved next year, and announcements will be made from time to time as to the progress and the time of the future meetings.

The one thing that impressed the committee quite seriously was the large attendance at the surgical clinics and the smaller attendance at the medical and special clinics. This is simply a matter of detail, and can be very easily arranged at our next Clinic Week, all clinics can be made attractive with proper preparation on the part of the man who gives them; and it is no small part of the value of the publication of the reports of our first Clinic Week that they serve to show our clinicians how to prepare their work for the benefit of the visiting physicians.

A good many clinicians interested in internal medicine and special medicine went to great pains to collect material from which to give clinics,

and many were disappointed at the small attendance and the indifference shown by the visitors; however, those who attended clinics in which the number of visitors was small perhaps learned more than those who attended clinics where the attendance was large, because the smaller number could get into closer contact with the patient and with the instructor, and thereby carry away a lasting and convincing idea formulated either by the clinician or by themselves.

The success of Clinic Week has been demonstrated in many ways, but mainly by letters received from physicians throughout the Northwest and by statements made at the time of the clinic. The material was found abundant, the clinicians efficient, and the instruction good. No time was wasted by a lot of outside interests, and apparently nothing really important was overlooked except in some minor details, which will be rectified another year. The men who participated in this work learned a great deal, and it is hoped that the visitors profited by the activities of the clinicians.

The Executive Committee would like to urge upon visitors the necessity of broadening their scope, and interesting themselves perhaps in some new departments of medicine rather than confining themselves to one department. It would be an advantage to the visitor and encouraging to the clinician. We realized in our work this year that some men gave too many dramatic and spectacular clinics, but somehow the visitors liked it; but there ought to be a little less of the spectacular and more of the scientific bedside knowledge of the sick, and we hope all of our readers will co-operate with us in our generalization of clinical medicine.

Minneapolis is a center, as it were, for men who travel from the West to the East, and in not a few instances we found men from Arizona, Montana, Nebraska, and the two Dakotas, as well as Wisconsin and northern Iowa, who were in the habit of going to Chicago. Some of these visitors stopped in Minneapolis on their way either going or coming, and these men expressed themselves as particularly pleased with the clinical material which was presented to them.

The Clinical Section of Hennepin County Medical Society proposes a further scheme to emphasize its work. A stenographer will be maintained at the Hennepin County Medical Society

rooms in the Donaldson Building on Nicollet Avenue and Seventh Street who will act as a bureau of information so that, when a visitor drops into Minneapolis and wants to see a certain clinic, he may telephone or call at the bureau of information, where he will be told at which hospital such clinic is being held, who the operator is, and the class of cases to be operated on, also cases shown in internal medicine and special lines. This is to be a permanent feature of the Hennepin County Society, and no doubt will help out the men who come into the city for a day or two, or even longer, and who would like to spend a few hours or days in the clinics.

This feature of the continuous clinical-information bureau is fathered by Dr. E. K. Green, president of Hennepin County Medical Society; and already enough interest has been taken in the project and enough subscriptions have been received for its maintenance, to insure a permanent bureau. In this manner the Clinical Section of the Society hopes to receive the co-operation of visitors, even though they are only transient, and the Section will in this way endeavor to present every day at some hospital something profitable and interesting.

A PATRIOTIC RALLY OF PHYSICIANS

The Council of National Defense in Washington has urged many of the cities to hold a meeting in order to get recruits for the Medical Reserve Corps; and we again call the attention of our readers to the arrangements which have been already made for a general meeting in the Gold Room of the Radisson Hotel at eight o'clock on the 18th of May. All physicians up to fifty-five years of age are eligible for some sort of work, and as Minnesota has nearly approached its quota of physicians it ought not to be difficult to induce a few more men to enter the Medical Reserve Corps.

The work done so far in the camps has been very instructive and very helpful, and in every camp the medical examiners have learned many new things. One thing is that they hear lectures, as they would at a medical school, by men of experience who were former teachers. Then, too, these same men are called upon to give lectures themselves, and this is a happy circumstance which is always helpful to the man under-

going his first public experience. Of course, there are many doctors who are ready talkers, but, unfortunately, there are many more who are indifferent talkers, or who have not learned to talk at all at public meetings, and this alone ought to attract the attention of the men in the Medical Reserve Corps. Nothing gives a man quite so much confidence in himself as to be able to get up and express himself clearly and concisely and to bring something new before his audience. Every man who enlists in the Medical Reserve Corps receives a commission, and it is up to him to gain a higher commission. A bill is now before Congress to make the rank of medical officers such that men of distinction in their profession will be recognized at home and abroad.

This invitation to attend the patriotic meeting is extended to every physician in the state, and it will be well worth while for men from outlying districts to come and get in touch with what is being done in the larger centers. The invitation goes so far as to include the wives, mothers, sisters, and friends of physicians, as well as the general public. In all probability the Governor of the State will be present, either to preside or talk, and everyone who knows him knows that he is a whole-hearted, loyal American and has the interests of the State at heart. The principal speaker, however, is Major Henry D. Jump, who is in a sense an organizer of the Medical Reserve Corps, and his duties take him from city to city where he can present the needs of the government to medical men particularly. It has been rumored that all of the medical profession of the United States will be mobilized. This is in line with the mobilization of other professional and industrial activities, and it is possible that in mobilizing medical men it may be necessary to shift physicians about. For instance, a small town in the state has two or three men practicing medicine. One, two, or three of these men may go into the service, leaving the town absolutely without a physician, and under such circumstances it will be necessary, as well as wise, for the government to suggest that a physician be requested to leave his home and his practice and take care of those who are deprived of a physician's aid. This plan, of course, is in the process of making, but it is one of the possibilities and may be one of the necessities in winning the war.

AN ATTEMPT TO WRECK A HEALTH DEPARTMENT

Since the inauguration of Mayor Hylan, of New York City, one of his first efforts was to inject politics into and to disorganize the City Health Department, and Mr. Hylan very aptly says: "I don't give a darn for those Federal government letters or for those from other people interested in public-health education. As long as I am mayor of the City of New York the health department will be run as I see fit."

He further says: "Experts must go, we will do away with the bureaus and committees, and separate certain experts from the city pay-roll."

Mayor Hylan does not take into consideration the number of medical men who give their services to the City of New York as a medical advisory board; and again Mr. Hylan objects to this board composed of men of international reputation—men who are experts in hospital management and in the various departments of medicine. He simply calls them "high-brows" and "left-overs" of the former health commissioner. The result has been a tremendous upheaval, and the resignation of prominent public-health experts.

Dr. J. Lewis Amster, the Commissioner of Health, has resigned, mainly because the mayor ignores the advice of Federal officers, and particularly because the mayor attempts to interfere with the conduct of his offices and has exhibited petty personal prejudices that interfere with public-health work, and belittles such men as Dr. Abraham Jacobi, Dr. S. S. Goldwater, Dr. Emmet Holt, Dr. Simon Flexner, and a number of others who have been giving their services to the City of New York because they are physicians interested in public-health problems. Dr. Royal Samuel Copeland, a homeopathic physician, the first of that school of medicine to hold an important post in the health service of New York City, and the first homeopathic physician to head the health department of any important American city, is to replace health commissioner Amster. One of the first things that Dr. Copeland did was to remove Dr. Lucius Polk Brown, chief of the Bureau of Foods and Drugs, and one of the special targets in Mayor Hylan's drive against the board of health. Dr. Amster refused to remove Dr. Brown on advice of the assistant district attorney, John T. Dooling, who held that Dr. Brown was too useful in cleaning up the graft cases in his department.

Evidently the lay press of New York, particularly the *New York Tribune*, does not think very favorably of Mayor Hylan's methods. No one seems to know where Mayor Hylan got his health training and everyone, at least a majority, suppose that his wrecking of the health department of New York is purely a political game. His attempt to reduce and abolish committees and bureaus is a step backward, and, because New York City has developed a health department that has been wonderful in its activities, the efforts of the Mayor will be extremely discouraging to physicians and laymen.

Among the things that Mayor Hylan has done is to refuse to provide the health department with funds with which to secure antitoxin, which is a calamity in itself. In spite of the fact that he has overridden all sorts of public advancements in order to secure public-health results, and in the face of the fact that the death-rate in the city for the first months of the year shows an increase, he is going on with his work of destruction. This is a very serious matter, much more so than the public will believe; and, if it occurs in New York City, it may occur in any city in the United States which has endeavored to elevate public-health standards. It may happen to us in Minneapolis or in the State of Minnesota if politicians begin to play with public-health departments. It is almost inconceivable that honorable men of public affairs holding high offices will attempt to interfere with organized health departments in city and state, but it is quite in line with the idea that inexperienced men know quite as much as those who have had special training. Then, too, comes the suggestion that relatives, and friends and political friends particularly, are to participate in the new appointments, as evidenced by the Hearst-Hylan organization in which there seems to be some cause for the rumor that \$190,810.00 worth of jobs go to the Mayor's relatives and friends and to the publisher's friends. Of course, the old Democratic party believes that "To the victor belong the spoils"; but they will spoil more things in the attempt to carry out the epigram than all the good that has been done before.

It is very interesting to know and follow the efforts of earnest trained workers in any department of public utilities when they make an effort to advance and improve conditions, existent or non-existent, and discouraging to find that all of their efforts are of no avail because one man, a politician, can overturn a whole structure if he so chooses.

BOOK NOTICES

THE MEDICAL CLINICS OF NORTH AMERICA. Volume I, Number 4 (The Boston Number, January, 1918). Octavo of 401 pages. 128 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published bi-monthly. Price per year: Paper, \$10.00; cloth, \$14.00.

The belated Boston Number of the Medical Clinics contains varied contributions from many of the most frequently mentioned Boston men.

Two articles pertaining to dermatology appear in this number. Both are intensely interesting and practical. C. J. White has a monograph on "Alopecia," taking up the various forms and giving treatment in detail for the premature loss of hair.

Fritz Talbot has a splendid lecture on "Infantile Eczema." Several cases illustrating the various types are brought forward. Talbot classified the infantile eczemas under the following headings:

1. Those due to external conditions.
2. Food idiosyncrasies, either in the patient's diet or the mother's.
3. Exudative diathesis.

The clinic of Dr. Christian is somewhat marred by too much conversation with the student. Copies of electrocardiograms serve to illustrate an otherwise splendid article. Dr. Christian exhibits one case of Stokes-Adams syndrome which he treated with thyroid extract according to Blackford and Willius, with the result that subsequent electrocardiograms showed only slightly prolonged P-R interval, a marked clinical improvement.

Dr. Joslin presents two cases of severe diabetes, and discusses them from various angles. He gives eight rules for treatment of threatening coma, which could well be made standard.

There is an article on the Röntgen diagnosis of diseases of the upper right abdominal quadrant by Drs. George, Leonard, and O'Brien. It is illustrated by numerous reproductions of plates, with which they support their contentions. They anticipate that their present position in the Röntgen diagnosis of gall-bladder disease will eventually be accepted, just as has been their stand as regards duodenal lesions.

The standardizing of certain terms often used in the diagnosis of pulmonary tuberculosis is a commendable feature of the article by Dr. John B. Hawes, 2d.

Dr. K. H. Thoma shows a number of photomicrographs of dental abscesses, as well as numerous films. He also gives a bibliography at the end of his contribution on "The Relation of Teeth and Jaws to Medicine," which includes many of the important contributions on this subject.

—Cutaneous review by DR. MICHELSON
General review by DR. PEPPARD.

MEDICAL CLINICS OF NORTH AMERICA, Vol. I, No. 3. The New York Number, November, 1917. Published bi-monthly. Philadelphia and London: W. B. Saunders Company. Price, per year, Paper, \$10.00; Cloth, \$14.00.

This, the third number of the series, is one of unusual interest. Many of the articles are rather dissertations than clinics, although they are none the less valuable

for that. Of particular interest at this time is a contribution by Dr. Rufus L. Cole on "The Treatment of Lobar Pneumonia," which will be read carefully by those who have to do with medical practice.

The clinic "Pharmacology of Digitalis," by Dr. Cohn, is a good résumé.

Dr. Warren Coleman contributes thirty pages on the typhoid diet, a large part of which is made up with most useful dietaries.

Perhaps the most illuminating to the general practitioner of the contents of this volume is the article by Professor Graham Lusk, of Cornell, on "Calories in Common Life," which, though brief, shows a masterly condensation of information on the value and cost of foods.

Einhorn's article, similarly on diet in diseases of the kidneys, represents the best of modern opinion.

There are many other good pieces of work, too many to itemize in a short abstract; in fact, this number partakes rather of the character of a review of the subjects treated than a report of clinics.

—CROSS.

NEWS ITEMS

Minnesota's contingent of the 5,000 volunteer physicians now needed is 70.

Captain S. Schaefer, of Winona, now at Camp Cody, has been made a major.

The Swedish Hospital of Minneapolis graduated twenty-nine nurses last month.

The City Hospital of Minneapolis graduated a class of twenty-seven nurses last week.

Dr. A. L. Kusske, of Hutchinson, has become assistant to Dr. R. E. Farr, of Minneapolis.

Dr. E. S. Porter, of Moore, Mont., has sold his practice to Dr. F. O. Vicars, of Livingston.

Dr. Willard A. Long, a pioneer physician of Lewiston, Mont., died last month at Miami, Florida.

Dr. W. G. Burton, of St. Louis, Mo., has become an assistant of Dr. G. W. Clay, of Malta, Mont.

A smallpox epidemic is feared in Poplar, where the disease has gotten into the public school.

The Southern Minnesota Medical Association will hold its mid-summer meeting in Winona on June 24 and 25.

Dr. Charles E. Lee, who practiced in St. Paul for over twenty-five years, died at an advanced age in Los Angeles, Calif., last month.

The April death-rate from pneumonia in Minneapolis was the highest on record for the city. It was over 25 per cent of the total death-rate.

Dr. W. F. Keller, after ten years of service as health commissioner of Sioux Falls, S. D., has

resigned because of a lack of time for the duties of the office.

The Rush Alumni of South Dakota will hold a meeting, at the State Association meeting, on Wednesday, at 5 P. M., to meet Professor E. L. Kenyon of Rush.

Dr. W. A. Jones, editor of THE JOURNAL-LANCET, went to Atlantic City last week to attend the annual meeting of the American Neurological Association.

Among the forty-three women physicians sent abroad by the Red Cross Society are Dr. Ida M. F. Alexander, of Sauk Center, and Dr. Hazel D. Bonness, of Stillwater.

Virginia (Minn.) is hereafter to pay its physician a salary, instead of giving him fees. Dr. C. W. Miller is the new city physician, and will be paid \$2,500 a year.

The Clay-Becker County Society held a quarterly meeting at Detroit last month. Dr. H. B. Sweetser, of Minneapolis, read a paper on "Abdominal Emergencies."

The Wadena-Todd County Sanatorium for Consumptives, called Fair Oaks, was opened on the 6th instant, with a reception for the public and appropriate exercises.

The Southwestern Hospital at Heron Lake will not be abandoned, as contemplated for some time. Dr. A. G. Chadbourn has leased the building, and will continue the hospital work.

The third series of free clinics for Minnesota children who have had poliomyelitis began in Minneapolis May 4, and continued ten days. The clinics will be held in other places in the state.

The visiting nurse who has been at work in the Beltrami County schools for six months reports 472 apparently normal pupils out of 2,537 examined, leaving 2,065 defective children in the 113 schools visited.

The thirty-three nurses of the Anoka State Insane Asylum, who recently went out on a strike, have returned to their places on the understanding that when funds are available their wages will probably be increased.

Word has been received from the Red Cross that Lieut. John S. Abbott, of St. Paul, in the British Medical Service and who has been missing since the 24th of March, is a prisoner in the hands of the Germans.

Dr. C. E. Gates, formerly of Goodhue, after spending a year in postgraduate work in surgery in the Chicago Postgraduate School, has become associated with Drs. Cobb, Beals, and Steinnette, of the Cobb Hospital, St. Paul.

Dr. A. B. Ancker, the head of the City and County Hospital of St. Paul, has become convinced that visitors carry into the hospital contagious diseases; therefore the number of visitors admitted will be largely reduced.

The Cass County Medical Society of North Dakota met in Fargo, N. D., on April 29, and had the members of the Clay-Becker (Minn.) Medical Society as guests. Luncheon was served at St. Luke's Hospital, and several clinics were given by members of the staff.

Drs. P. A. Nestos, H. M. Erenfeld, and F. A. Brugman, of Minot, N. D., have leased the Minot hospital formerly conducted by Dr. G. R. Ringo. Substantial improvements have been made on the building and in the equipment, and a first-class hospital will be conducted by the new firm.

The Montana State Nurses' Association held its annual meeting in Bozeman on April 26 and 27. A rule was adopted requiring one year's high-school work for nurses seeking diplomas. This requirement will be annually increased by one year until a full four-year course is required.

The magnitude of the illicit sale of drugs to drug addicts in Minneapolis is becoming known to some degree through the trials of persons charged with this trade; and it is enormous. The city has thousands of these almost hopeless men, and a number of physicians are charged with the sale of drugs to them.

Dr. George W. Bliss, of Valley Springs, S. D., died last month at the age of 50. He was a graduate of the old College of Physicians and Surgeons of Minneapolis, Class of '95, and had practiced at Valley City since his graduation. He died of pneumonia, his constitution having been weakened by overwork.

Dr. William Wakefield, of Lake Benton, was killed by a train while attempting to cross the track on April 28 at Lake Benton. The accident occurred in the early evening, and the body was not found until the next morning. Dr. Wakefield was a graduate of Michigan, and began practice in Minnesota in 1883. He was 73 years old.

A war conference of the secretaries of the State Medical Associations was held in Chicago on April 30 to devise a plan for enlisting 5,000 more medical men. The meeting was attended by Dr. Thos. McDavitt, representing Minnesota, who was made chairman of the conference; Dr. R. D. Alway, representing South Dakota; Dr. H. J. Rowe, representing North Dakota; and Dr. E. G. Balsam, representing Montana.

Every physician who can do so should attend the patriotic rally to be held in the Gold Room of the Radisson Hotel, Minneapolis, at 8 p. m., May 18, for the purpose of raising Minnesota's share of the new call for 5,000 men for the Medical Reserve Corps. Good speakers will be present, and the meeting will be a memorable one. Like meetings are to be held in all parts of the country. The subject is further noticed in our editorial columns.

Lieut. John Paul Rosenwald, of Minneapolis, was recently killed on the battle-line in France, being struck by a shell fragment. Lieut. Rosenwald had received the distinguished service medal of the United States and the French *croix de guerre* for conspicuous bravery. He was a graduate of Creighton Medical College of Nebraska, and had practiced in Mankato for several years. When a student of the University of Minnesota he distinguished himself in football. He died at the age of 38.

Drs. W. H. Magie, of Duluth; W. L. Palmer, of Albert Lea; H. M. Workman, of Tracy; H. P. Ritchie and Thos. McDavitt, of St. Paul; and J. Warren Little, of Minneapolis, attended the meeting of the Medical Department of the Council of National Defense held at Washington on May 4 and 5. Plans were taken at this meeting to organize a National Volunteer Medical Service Corps, to be composed of medical men not eligible to the Medical Reserve Corps because of age (over 55), slight physical disabilities, and other causes. This will result in a possible complete mobilization of the medical men of the country.

The LaSalle building in Minneapolis was built especially for physicians and dentists, and has as part of its equipment two very complete operating-rooms for physicians and dentists, and rest-rooms for both children and adults. Two nurses are constantly in charge, one being an especially trained anesthetist. These rooms are open at all times to the medical and dental professions of Minneapolis. We invite physicians to inspect, as well as use, them. These rooms are operated for the convenience of the profession, not as a dividend-payer, thus making the rates very reasonable, and service is excellent.—La Salle Building Tenants' Association.

RECENT NEW ASSIGNMENTS OF NORTH-WESTERN MEDICAL OFFICERS

Minnesota—

To Fort Riley, Kas.: Capt. J. P. Chance, International Falls; Lt. J. F. Traxler, Henderson; Lt. Gilbert

Hendrickson, Lewiston; Lt. G. L. Johnson, Newfolden. To Camp Crane, Pa.: Lt. A. M. Hanson, Dawson. To Fort Sheridan, Ill.: Lt. P. C. Bjorneby, Bagley; Lt. J. T. Riess.

To Army Medical School: Lt. A. M. Treat, Blooming Prairie; Lt. M. A. Desmond, Glenwood; Lt. F. B. Mach, Minneapolis; Lt. H. E. Marsh, Rochester; Lt. H. W. Arndt, St. Cloud.

To Camp Dodge, Iowa: Lt. W. E. Camp, Minneapolis.

North Dakota—

To Camp Custer, Mich.: Lt. F. J. Scully, Bottineau.

To Fort Riley, Kas.: Lt. J. A. Johnson, Grand Forks.

South Dakota—

To Fort Riley, Kas.: Capt. J. W. Brackett, Sturgis. Lt. A. B. Scheib, Hitchcock.

To Army Medical School: Lt. W. C. Moodie, Elk Point.

To Camp Lewis, Wash.: Lt. F. C. Smith, Yankton.

To Chicago (Presbyterian Hospital): Capt. A. V. Elliott, Beresford.

Montana—

To Army Medical School: Lt. L. A. Anderson, Glendive; Lt. W. A. Estabrook, Moccasin.

To Fort Riley, Kas.: Capt. A. L. Ward, Havre; Lt. J. B. Hobson, Missoula.

Transfers

Lt. Pio Blanco, Rochester, Minn., from Fort Riley, to Boston (Harvard).

Capt. J. W. Lee, Minneapolis, from Mineola, to Camp Colt, Pa.

Lt. C. D. Squires, Rochester, Minn., from Camp Dix to Camp Crane, Pa.

Major Paul B. Cook, St. Paul, from Fort Riley, to Camp Dodge, Iowa.

Capt. S. F. Rudolph, Albert Lea, Minn., from Camp Taliaferro to Camp Jackson, S. C.

Major W. H. Darling, Minneapolis, from Rantoul to Camp Shelby, Miss.

Lt. T. C. Gilbert, Vernon Center, Minn., from Fort Oglethorpe to Camp Shelby, Miss.

Capt. C. R. Christenson, Starbuck, Minn., from Camp Custer to Chicago (Presbyterian Hospital).

Lt. A. E. Detuneg, Preston, Minn., from Camp Sherman to Chicago (Presbyterian Hospital).

Lt. J. H. Cosgrove, Duluth, from Newport News to Fort Oglethorpe.

Lt. O. L. Winter, St. Paul, from Boston to Fort Riley, Kas., as instructor.

Capt. J. D. Walker, Wykoff, Minn., from Camp Cody to Fort Sam Houston, Texas.

Lt. R. A. Johnson, Minneapolis, from Garden City to Mineola, L. I.

Lt. J. E. Hanna, Fargo, N. D., from Fort Riley to Boston (Harvard).

Major Eric P. Quain, Bismarck, N. D., from Camp Jackson to Camp Greene, Camp Meade, and Camp Lee, for conferences, and back to Camp Jackson.

Lt. G. V. Jamieson, Devils Lake, N. D., from Camp Beauregard to New Orleans.

Lt. A. P. Nichtwey, Dickinson, N. D., from Camp Dodge to New York City (Bellevue).

Lt. Benjamin Franklin, Rugby, N. D., from Camp Doniphan to Camp Dodge.

Lt. A. O. Fasser, Bellefourche, S. D., from Fort Riley to Boston (Harvard).

Capt. S. G. Arnold, Billings, Mont., from Fort Riley to Fort Sam Houston, Texas.

Lt. A. A. Husser, Hingham, Mont., from Fort Riley to Boston (Harvard).

Lt. J. W. Olson, Troy, Mont., from Fort Riley to Boston (Harvard).

Major T. C. Witherspoon, Butte, Mont., from Camp Dodge to Camp Sherman, Camp Lee, and Camp Zachary Taylor, for conference, and back to Camp Dodge.

Lt. E. S. Porter, Moore, Mont., from Fort Riley to New York City.

Honorably Discharged

Lt. C. N. Boyle, Eureka, Montana.

PROGRAM OF THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION

ANNUAL MEETING

Mitchell, South Dakota

WEDNESDAY, MAY 22, 9:30 A. M.

1. *President's Address*—Dr. H. J. G. Koobs, Scotland, S. D.

2. *Injuries of Central Nervous System*—Dr. F. E. Clough, Lead, S. D.

Discussion opened by Dr. F. V. Willhite, Yankton, S. D.

3. *Kidney Injuries*—Dr. G. G. Cottam, Sioux Falls, S. D.

Discussion opened by Dr. R. L. Murdy, Aberdeen, S. D.

4. *Infant Mortality*—Dr. F. C. Rodda, Minneapolis, Minn.

Discussion general.

5. *Mechanical Derangements of the Knee-Joint*—Dr. Melvin S. Henderson, Mayo Clinic, Rochester, Minn.

Discussion general.

WEDNESDAY, MAY 22, 2:00 P. M.

6. *Address*—Hon. Peter Norbeck, Governor South Dakota, Pierre.

7. *Medical Reserve Corps*—Dr. Henry J. Jump, Major M. R. C., Surgeon-General's Office, Washington, D. C.

8. *Military Surgery*—Dr. E. S. Judd, Major M. R. C., Rochester, Minn.

9. *Medical Advisory Boards in Selective Drafts*—Dr. F. A. Spafford, Lieutenant M. R. C., Flandreau, S. D.

10. *Experiences in France*—Dr. R. D. Wilson, Captain C. A. M. C., Aberdeen, S. D.

THURSDAY, MAY 23, 9:30 A. M.

11. *The Problem of Stammering and Its Solution*—Dr. E. L. Kenyon, Chicago, Ill.

Discussion general.

12. *Acute Suppurative Otitis Media and Its Treatment*—Dr. L. N. Grosvenor, Huron, S. D.

Discussion opened by Dr. R. D. Alway, Aberdeen, S. D.

13. *Suspension Laryngoscopy*—Dr. J. D. Lewis, Minneapolis, Minn.

Discussion opened by Dr. J. G. Parsons, Sioux Falls, S. D.

14. *The Use of the Conjunctival Flap in Eye-Injuries*—Dr. F. I. Putnam, Sioux Falls, S. D.

Discussion opened by Dr. J. A. Hohf, Yankton, S. D.

THURSDAY, MAY 23, 2:00 P. M.

15. *Local Anesthesia (illustrated)*—Dr. R. E. Farr, Minneapolis, Minn.

16. *Why the Professional Anesthetist?*—Dr. R. M. Walters, Sioux City, Iowa.

Discussion general on the above two papers.

17. *Public-Health Problems and Their Relation to the General Practitioner*—Dr. Louis Holtz, Aberdeen, S. D.

Discussion opened by Dr. Mortimer Herzberg, Vermillion, and Dr. Park B. Jenkins, Wababay.

18. *The Control of Venereal Diseases*—Dr. C. E. McCauley, Aberdeen, S. D.

Discussion opened by Dr. J. D. Whiteside, Aberdeen, S. D.

Report of Medical Defense Committee.

Report on South Dakota Tuberculosis Sanitarium.

A Rush alumni meeting will be held on Wednesday at 5 P. M. All Rush men in South Dakota are wanted at the meeting.

POSITION WANTED

An experienced nurse wants a position as an assistant superintendent of a small hospital or as a surgical nurse. Good references given. Address 133, care of this office.

OFFICE POSITION WANTED

A young lady with two years' experience in a doctor's office desires location. Can give anesthetics, take and develop x-ray plates, etc. Address 134, care of this office.

PHYSICIAN WANTED

Physician for services in hospital, largely surgical. Salary, \$1,500 a year and maintenance. State personal and professional qualifications in first letter. Address 129, care of this office.

LOCUM TENENCY WANTED

Locum tenens work for from three to twelve months by Class A graduate. Twenty-nine years old. Married. Two years' hospital and general experience. Address 131, care of this office.

OFFICE FOR RENT

Three hundred square feet of office room in the Physicians' and Surgeons' Building, Minneapolis. Common reception-room with a surgeon and two dentists. Address 132, care of this office.

PRACTICE FOR SALE

A \$5,000 cash practice for sale in town of 650 in western Minnesota. No competition. Electric lights, water, good school, and well settled community. Will vacate June 1st. Army service. Address 135, care of this office.

OPENING FOR PHYSICIAN

An A No. 1 opening for a good physician in a small North Dakota town. A man who can do some surgery preferred. Plenty of work to do. No practice nor property to be purchased to get in. If interested write at once before the place is taken. Address 124, care of this office.

ASSISTANT WANTED

An assistant is wanted by a physician with a large surgical and general practice in a town of 4,000 in the Park Region district of Minnesota; married man preferred. Good opportunity for special work in x-ray and general laboratory technic. Good salary. Address 130, care of this office.

DOCTOR WANTED

As business manager and house doctor co-operating with expert medical specialists' staff. Attractive central location and pleasant home. No night work. Limited outside practice permitted. Geniality as well as capability required. Write or apply to Loring Park Sanatorium for Diabetes, 1508 Harmon Place, Minneapolis, Minnesota.

PHYSICIAN WANTED

A young physician can find a fine opportunity by investigating this proposition: a town of 2,200 and only one doctor; prosperous community; good collections; excellent territory to draw from. A physician can step into a lucrative practice that has no strings attached to it. Write, wire, or come and investigate at once. Address 119, care of this office.

A MEDICAL ASSISTANT

A large medical and surgical firm in one of the best cities (15,000 inhabitants) of the Northwest wants a man of special training and experience to take over medical part of the work. A good salary and an interest in the business will be given to the right man. Address 127, care of this office, and give a full account of yourself.

PHYSICIAN WANTED

Physician wanted for a general country practice which will run \$5,000 per year collectible. Must be an American and alive. Good town in northern North Dakota. Best kind of support will be given a good man. Nothing to buy. Good schools. Address 123, care of this office.

OFFICE GIRL WANTED BY A MINNEAPOLIS SPECIALIST

An experienced office girl of good address with a fair knowledge of stenography is wanted. An excellent opening for the right girl. Might consider one without experience. Address 120, care of this office.

PHYSICIAN'S HOUSE FOR SALE IN MINNEAPOLIS

If you want to come to the city and locate at once in a house that will be worth one thousand dollars a year to you because of its location, see my house. Modern in every way, and a bargain. Address 126, care of this office.

PHYSICIAN WANTED

A competent physician is wanted in a good farming community in northwestern Minnesota. Scandinavian preferred. The village has always had a good doctor; those who have located here soon accumulated a few thousand dollars, and then left for a larger city. Address 121, care of this office.

LOCATION WANTED IN ONE OF THE TWIN CITIES

I desire a locum tenency, assistantship, association with good combination, or will purchase partnership in either of the Twin Cities. I am an American, married, aged 40, graduated 1898, 20 years' experience, extensive study in Europe, speak three languages, always had large practice and doing referred surgical work at present, high-grade work in surgery and medicine. Best of references and wide acquaintance in Twin Cities. Will make personal visit at once to look proposition over, and acquaint you with my personality and ability. Licensed in Minnesota and several other states. Honorably discharged from military service. Address 128, care of this office.

DEATHS REPORTED TO THE STATE BOARD OF HEALTH OF
MINNESOTA FOR THE MONTH OF FEBURARY 1918

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles †	Small Pox	Whooping Cough	Acute Anterior Polomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Fuerperal Septicemia	Accidental Deaths
Ada	1,253	1,432	1													1		1
Albert Lea	4,500	6,192	8	1														
Alexandria	2,681	3,001	4													2		
Anoka	3,769	3,972	7															
Austin	5,474	6,960	6															1
Barnesville	1,326	1,353	2															
Bemidji	2,183	5,099	6	1		4												1
Benson	1,525	1,677	4			1										1		
Blue Earth	2,900	2,319	4													1		
Brainerd	7,524	8,526	11												1	1		1
Breckenridge	1,282	1,840	3			2												
Canby	1,100	1,528	3															
Cannon Falls	1,239	1,385	1													1		
Chaska	2,165	2,050	1															
Chatfield	1,426	1,226	2															
Cloquet	3,074	7,031	6			1										1		1
Crookston	5,359	7,559	7	1	1	1												
Dawson	962	1,318	1															
Detroit	2,060	2,807	4															
Duluth	52,968	78,466	90	7	5	14									1	6		1
East Grand Forks	2,077	2,533	1															
Ely	3,572	3,572	1			1												
Eveleth	2,752	7,036	6	1													1	
Fairmont	3,440	2,958	7			1										1		
Fairbault	7,868	9,001	7	1		2										1		
Fergus Falls	6,072	6,887	8			1		1								1		
Glencoe	1,788	1,788	2			1												
Glenwood	1,116	2,161	2															
Granite Falls	1,454	1,454	0															
Hastings	3,811	3,983	1															
Hutchinson	2,495	2,368	5															
International Falls		1,487	7			1				1					3			
Jordan	1,270	1,151	0															
Lake City	3,142	3,142	4			1										2		
Le Sueur	1,937	1,755	0															
Little Falls	5,774	6,078	3															
Luverne	2,223	2,540	3															
Madison	1,336	1,811	6															
Mankato	10,559	10,365	23	1	1	5			1						1	1		2
Marshall	2,088	2,152	3															
Meirose	2,591	2,591	0															
Minneapolis	202,718	301,408	351	35	6	35	5	3			6		1	3	3	29	2	17
Montevideo	2,146	3,056	2			1												
Montgomery	979	1,267	0															
Moorhead	3,730	4,840	5															
Morris	1,934	1,685	*															
New Prague	1,228	1,554	4	2		1												
New Ulm	5,403	5,643	0															
Northfield	3,210	3,215	4													1		
Ortonville	1,247	1,774	2															
Owatonna	5,561	5,653	8			2										1		
Pipestone	2,536	2,475	2															
Red Lake Falls	1,666	1,666	1															
Red Wing	7,525	9,048	10	1		1									1	1		1
Redwood Falls	1,661	1,666	3															
Renville	1,075	1,182	0															1
Rochester	6,843	7,844	46	5							1					9		
Rushford	1,100	1,011	1															
St. Charles	1,304	1,159	3															
St. Cloud	8,663	10,600	15			1										1	1	
St. James	2,102	2,102	1															
St. Paul	163,632	214,744	192	21	8	13	2				1				8	13	1	14
St. Peter	4,302	4,176	4															
Sauk Centre	2,154	2,154	2													1		1
Shakopee	2,046	2,302	1															
Sleepy Eye	2,046	2,247	3	1		1										1		
South St. Paul	2,322	4,510	5	1				1										
Staples	1,504	2,558	8		1				1									
Stillwater	12,318	10,198	5	2														1
Thief River Falls	1,819	3,174	6	1							1						1	
Tower	1,111	1,111	1			1										1	1	
Tracy	1,911	1,826	2			1												
Two Harbors	3,278	4,990	4	1	1										1			
Virginia	2,962	10,473	16			2		1										8
Wabasha	2,622	2,622	0															
Warren	1,276	1,613	4		1	1												1
Waseca	3,103	3,054	3															
Waterville	1,260	1,273	0															
West St. Paul	1,830	2,660	3	2														
Willmar	3,409	4,135	4	1														
Winona	19,714	18,583	16			1										1		
Winthrop	813	1,043	0															
Worthington	2,386	2,386	1															

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro-Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	0															
Aitkin	1,719	1,633	3									1						
Akeley			0															
Appleton	1,184	1,221	2			1												
Belle Plaine	1,121	1,204	1															
Biwabik		1,690	1															
Bovey		1,377	0															
Browns Valley	721	1,058	0															
Buffalo	1,040	1,227	1															
Caledonia	1,175	1,372	1															
Cass Lake	546	2,011	2	2														
Chisholm		7,684	8	1		1												
Coleraine		1,613	2															1
Delano	967	1,031	0															
Farmington	733	1,024	2															
Fosston	864	1,055	2															
Frazee	1,000	1,645	1															
Grand Rapids	1,428	2,239	2															
Hibbing	2,481	8,832	14			2									1	2		4
Jackson	1,756	1,907	0															
Janesville	1,254	1,173	3												1			
Kenyon	1,202	1,237	0															
Lake Crystal	1,215	1,038	3															
Litchfield	2,280	2,333	1	1														
Long Prairie	1,385	1,250	1															
Madelia	1,272	1,273	2	1														
Milaca	1,204	1,102	3															
Mountain Lake	959	1,081	2								1							
Nashwauk		2,080	2			1									1			
North Mankato	939	1,279	3	1														
North St. Paul	1,110	1,404	0															
Osakis	917	1,013	1															
Park Rapids	1,313	1,850	2													1		
Pelican Rapids	1,033	1,019	1															
Perham	1,182	1,376	5		2													1
Pine City	993	1,258	2	1														
Plainview	1,038	1,175	1															
Preston	1,278	1,193	1															
Princeton	1,319	1,555	3															
St. Louis Park	1,325	1,743	2															
Sandstone	1,189	1,818	1															
Sauk Rapids	1,391	1,745	0															
South Stillwater	1,422	1,343	1															
Springfield	1,511	1,482	7		1											2		
Spring Valley	1,770	1,817	7	1														2
Wadena	1,520	1,820	2															
Wells	2,017	1,755	3	1					1						1			
West Minneapolis	2,250	3,022	1															
Wheaton	1,132	1,300	4	1														
White Bear Lake	1,288	1,505	1															
Windom	1,944	1,749	0															
Winnebago City	1,816	2,555	0															
Zumbrota	1,119	1,138	2			1												
STATE INSTITUTIONS																		
Anoka, Asylum			2															
Faribault, School for Blind			0															
Faribault, School for Deaf			0															
Faribault, School for Feeble Minded			7		2													
Fergus Falls, Hospital for Insane			15	1	1	2												
Hastings, Asylum			1															
Minneapolis, Soldiers' Home			8													1		
Owatonna, School for Dependents			0															
Red Wing, State Training School			0															
Rochester, Hospital for Insane			10	3												1		
Sauk Centre, Home School for Girls			0															
St. Peter, Hospital for Insane			15	2		3												
St. Cloud, State Reformatory			0															
Stillwater, State Prison			0															
OTHER PARTS OF STATE			688	49	9	65	3	7	2		4				15	58	3	43
Total for state			1853	151	36	172	15	14	4		15		1	4	40	146	10	102

*No report received. REGISTRAR not doing his duty
148 stillbirths not included in above totals.

Some Facts About Oats

Pound for pound — in food units — they are about twice as nutritious as round steak.

They are 10 per cent over wheat.

They form a uniquely balanced food with all the needed elements, including vitamins and bran.

They are rich in phosphorus and lecithin.

They are uniquely economical.

Quaker Oats supply nutrition at a cost of five cents per 1000 calories.

In other foods those same food units average about as follows:

In Eggs,	.	.	.	.	.	50c
In Meats,	.	.	.	.	.	40c
In Chicken,	.	.	.	.	.	90c
In Bread,	.	.	.	.	.	9c

Seven full meals on Quaker Oats cost the same as one ham-and-egg meal.

Quaker Oats

The Flavoury Flakes

Quaker Oats excel in flavor because we use the queen grains only — just the plump, rich oats. We get but ten pounds from a bushel. They won supreme place because of that flavor — a world-wide preference. Yet they cost no extra price.

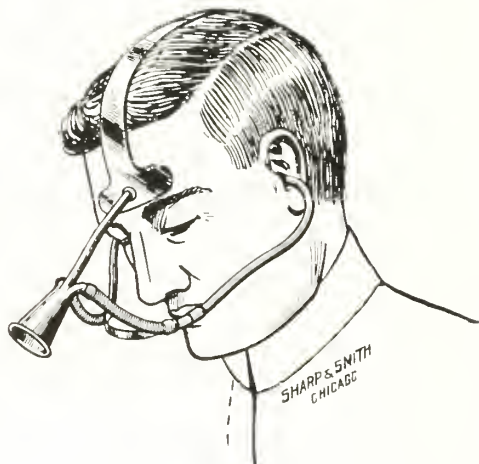
The Quaker Oats Company

Chicago

(1865)

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

155-7 N. Michigan Blvd. - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY
AND PROMPTNESS ARE OUR
CHIEF AIMS. Send to our nearest
laboratory for fee list and containers
with instructions for collecting all
specimens. These containers will be
sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aen aerobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or

Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

PUBLISHER'S DEPARTMENT

THE NATIONAL PATHOLOGICAL LABORATORY

The development of the art and the science of medicine of the past few decades has been, almost exclusively, a development along diagnostic lines. The successful general practitioner or the successful specialist is generally the best diagnostician; and diagnosis will never become a lost art until it becomes an exact science, which it may never be. Its greatest progress in science has been accomplished in the pathological laboratory; while the establishment and successful conduct of public pathological laboratories have brought to all medical men, even the general practitioner in the remoter country districts, the help in diagnosis furnished by the laboratory.

All this is a mere truism but how many medical men there are who never take advantage of the public laboratory.

If one such man reads these lines, we trust he will soon make himself acquainted with work done by such a public laboratory as the National Pathological Laboratories of Chicago, with branches in St. Louis and New York. Correspondence with the men at the head of this institution will readily convince any physician of the help they can give him. It's worth while.

CHLORETONE AS A HYPNOTIC AND SEDATIVE

Administered internally, Chloretone passes unchanged into the circulation and is deposited in considerable quantities in the cerebral tissue, the patient falling into a profound sleep. Its action is like that of natural fatigue. Hypnosis passes off gradually, and no habit is formed. Acting upon the central nervous system, therapeutic doses have little or no effect upon the heart and respiratory centers.

Chloretone possesses a wide range of therapeutic applicability. It is a valuable sedative in alcoholism, cholera and colic. It is useful in epilepsy, chorea, pertussis, tetanus and other spasmodic affections. It allays, in most cases, the vomiting of pregnancy, gastric ulcer and seasickness. As a sedative and hypnotic it is indicated in acute mania, puerperal mania, periodic mania, senile dementia, agitated melancholia, motor excitement of general paresis, insomnia of pain (as in tabes dorsalis, cancer and trigeminal neuralgia), insomnia of mental strain, insomnia of nervous diseases, etc. In insomnia it is often effective when other drugs have failed.

The therapeutic dose for an adult is ten to fifteen grains. Good results, however, have been had with doses as small as seven and one-half grains. Sleep usually follows in half an hour to one hour. The administration of Chloretone is not attended with digestive disturbances.

THE MEDICAL PROTECTIVE COMPANY

The malpractice suit is not a bogey of the mind, but a hard fact to be reckoned with. No man is big enough in reputation or poor enough in worldly good to escape it; and the cost of defending it is too great for the individual, just as the cost of a fire is too great for the individual to pay. Insurance, and insurance only,

is the solution of the problem. Intelligence and common sense tell one what kind of insurance and what company to select as safeguard against this evil. If a medical man has these rare qualities, he will hardly fail to select the Medical Protective Company of Fort Wayne, Indiana, to protect him. If he has neither of these qualities, he will make no mistake if he selects this company with the ten points of superiority set forth in an analysis of its policy.

The disreputable damage suit lawyer hesitates a long time before bringing a suit that this company is going to defend.

WHOLE GRAIN FOODS

The process of "puffing" rice, corn, and wheat for table use renders these grains more easily digested and more palatable, while preserving much of the best food ingredients wholly lost in modern milling processes.

The puffed foods should have an even larger—indeed much larger—place on the table of the home, the hotel, and the hospital than they now occupy, for they not only are wholesome and palatable, but they are economical.

By a larger use of puffed rice and corn, a patriotic saving for the starving civilians of Europe is effected. Physicians can do a real service for the Government by informing their patients that this excellent form of our staple cereals should be used more largely.

KENILWORTH SANITARIUM

Six miles north of Chicago is the beautiful suburb of Kenilworth, the home of Kenilworth Sanitarium, built and equipped for the treatment of nervous diseases.

Two things characterize this institution: The building and its equipment and environment are well-nigh ideal, probably not equalled by a half dozen other institutions for like purposes in this country. Secondly, it is conducted by a man whose personal and professional equipment for his work is very rare, and is probably unexcelled by any other man in the country. Dr. Sanger Brown holds a very high and honorable place in the medical circles of the world; and his associates likewise maintain high professional standards.

JORDAN SULPHUR SPRINGS AND MUD BATH SANITARIUM

The fact that sulphur-mud baths, properly given, bring very quick, almost immediate, relief to a very large percentage of the patients who take them, even though such treatment is temporary in many cases, bears indubitable testimony to two things:

1. These baths are worth taking for the temporary relief they are so sure to furnish in many distressing conditions of long standing.

2. Any treatment, other than narcotic or manifestly otherwise injurious, that gives temporary relief in a very large percentage of certain well-defined conditions, must tend to give permanent relief in a considerable percentage of such cases.

The above facts and conclusions are the best arguments for the use of sulphur-mud baths; and physicians who have acute or chronic cases of rheumatism, gout, and all the ordinary stomach, kidney, and liver troubles, will do well to send them to the Jordan Sulphur Springs and Mud Bath Sanitarium, an old-established and thoroughly reliable institution at Jordan, Minn.

PETROLATUM

Petrolatum, especially in the liquid form, is so widely used as a medicament for many new purposes that it is very necessary to obtain it in the best possible form, especially when used internally as a lubricant to relieve severe constipation and intestinal irritation with their possible serious consequences. Even for external use it is well to have the best.

Messrs. E. R. Squibb & Sons have put upon the market a heavy form of petrolatum refined under their control from California oil with the guarantee of their name; and this is a sufficient guarantee to the medical profession. It is designated as "Liquid Petrolatum Squibb," and is recommended only for the cases in which experience has amply proved its value.

A COMPLETE OFFICE OUTFIT FOR \$75.00

On another page will be found an illustration of the parts of the outfit offered by Frank S. & Co. for \$75.00. Of course this is a special offer made at a very low price to show medical men the grade of office fixtures manufactured by the Betz Company and to gain their confidence in the quality and the price of everything the company makes or sells.

It is interesting.

THE TYPICAL CHLOROTIC PICTURE

This picture is one that is quite familiar to every practitioner of experience,—the peculiar pallor of the skin, the livid lips, the colorless conjunctivæ, and the characteristic expression of anxiety. Add to this the hemic murmur or the venous hum, with the low percentage of hemoglobin, as shown by the hemologic test, and the diagnosis is not difficult. A rapidly acting blood-builder is the *sine qua non* in such cases, and should be promptly ordered. It is important, however, that the hematonic prescribed should be free from irritant action upon the digestive mucosa, while, at the same time, quickly absorbable and assimilable. Pepto-Mangan (Gude) fully meets these requirements, and if given steadily and persistently will undoubtedly promptly revitalize the dehemoglobinated blood and thus restore vital resistance, color, strength, and appetite. Fresh air, good food, and general hygienic treatment are, of course, also indicated.

HEMAGULEN

Hemagulen is a physiological hemostatic for local application. It is prepared from fresh brain substance. Physicians find Hemagulen indicated in all types of hemorrhages from capillaries and small vessels where it can be applied to the bleeding surface, such as after the removal of adenoids, tonsils, and other operations on the nose, throat, etc.

Hemagulen may be given orally, diluted with water, in gastric and duodenal hemorrhages.

Dentists use Hemagulen with fine results in checking the bleeding after the extraction of teeth.

Hemagulen is supplied in one-ounce bottles, and is prepared by Eli Lilly & Company who will be glad to send literature on request.

GYNECOLOGICAL USES OF ALKALOL

The mucous membrane of the genital tract is peculiarly liable to irritation, inflammation, and germ-infection. Congestion, which is normally physiological, easily becomes abnormal and pathological. Hypersecretion of the abundant gland-cells is easily induced and with difficulty overcome. Epithelium is easily exfoliated, and new-formed tissue made to become a menace to the recovery of normal conditions.

Removal of excess secretions is indicated, but removal by methods and agents commonly employed tends to produce further excess. The same is true of depletion, which, while of temporary value in relieving congestion, tends, if continued, to relaxation,—the loss of circulatory as well as secretory tone,—so that the congestion is made worse.

A mucous membrane below normal tone yields more secretion than under normal conditions. Congestion, long continued, leads to chronic low-grade inflammation, and the products of this give to the augmented secretion more or less irritating properties. A vicious circle is thus established, which is hard to break, and a condition set up that is difficult to treat satisfactorily.

Hence, much depends on the agent used, whether for simple cleansing, mild astringent, or for tonic effect. A relaxed, over-stimulated, oversecreting mucous membrane cannot be brought back to normal by prolonged use of astringents or depleting agents. Its cells must be fed, circulation regulated, and secretions made to improve in quality.

Alkalol does this and does it because it is physiologically adapted to bring about improvements in all these respects.

IMPORTANT CHANGE IN SALES ORGANIZATION OF VICTOR ELECTRIC CORPORATION

With a view to further betterment of "Victor Service" in the Dakotas, Minnesota, Northwestern Wisconsin, and Montana, the Victor Electric Corporation, whose advertising appears elsewhere in this journal, have eliminated any possibility of divided responsibility in their sales and service work in the afore-mentioned territory by appointing Mr. F. Lorne Pengelly as their exclusive and sole sales distributor for x-ray and electrotherapeutical apparatus which comes under the "service" category.

Dealers in this territory will continue to supply Victor products and accessories which do not require service.

Mr. Pengelly has opened up elaborate quarters on the second floor of the La Salle building, Minneapolis, and will have associated with him Mr. M. J. Waller in the sales capacity and Mr. L. J. Hennie for service and installation work.

Mr. Pengelly has resided in Minneapolis for the past four years, during which time he has made many friends for the Victor Corporation; and a cordial invitation is extended to the medical profession to visit Mr. Pengelly's new quarters at their convenience.

THE JOURNAL-~~L~~ANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, JUNE 1, 1918

No. 11

RECENT ADVANCES IN THE SURGERY OF THE BRAIN AND SPINAL CORD*

BY WILLIAM SHARPE, M. D.

Professor of Neurological Surgery, New York Polyclinic Hospital and Medical School

NEW YORK CITY

The field of neurological surgery has so broadened during the past fifteen years as the result of the pioneer work of Horsley, von Eiselberg, and Krause, and, in this country, of Cushing, that a number of neurological conditions, formerly considered hopeless, are now amenable to improvement at least; and in some of the early cases, even a cure may be expected. This advance has been due chiefly to earlier diagnosis, an improved surgical technic, and surgical judgment, and to better team-work between the surgeon and the neurologist.

Earlier diagnosis in many intracranial conditions is now possible, mainly as the result of the more general and intelligent use of the ophthalmoscope. It is now commonly recognized and appreciated that the condition of marked papillo-edema and "choked disks" is the end-result of pre-existing pressure signs observable in the fundus of the eye.¹ No longer is it necessary to wait until a measurable papillo-edema occurs before it can be definitely stated that an increase of the intracranial pressure is present. Besides the early fundal signs ascertainable by an ophthalmoscopic examination, the most accurate and definite test of an increase of the intracranial pressure is lumbar puncture, using the spinal mercurial manometer. In this manner the oph-

thalmoscopic findings can be confirmed. Intracranial localization has been greatly facilitated by the most thorough neurological examinations, and yet in many patients the localizing signs are so obscured by the increased intracranial pressure that they can be easily overlooked, and they may even be absent; therefore the importance of examining these patients early is obvious. No patient should be allowed to develop a secondary optic atrophy and its resulting blindness while an effort is being made to localize the condition,—an unimportant consideration in many patients; an early cranial decompression will save the eye-sight; and frequently the lesion can be localized later. X-rays are of much assistance in the diagnosis of many cranial and spinal lesions. By this means long-continued intracranial-pressure signs may also be determined, and frequently the site of the lesion indicated; however, a negative picture, especially of the skull, means nothing, and frequently the interpretation of apparently positive plates is most difficult and at times confusing. Naturally, in cranial and spinal injuries, the value of the x-rays is very great indeed, especially regarding accurate diagnosis; and yet the treatment of such conditions, particularly of brain-injuries, depends upon the presence, or absence, of an increased intracranial pressure, whether the skull itself is fractured or not; whereas, in the spinal injuries the chief con-

*Read by invitation before the Hennepin County Medical Society ("Clinic Week"), in Minneapolis, Minn., April 8, 1918.

cern is whether the spinal cord has been irreparably damaged or not, the spinal fracture being of little importance neurologically so far as the treatment is concerned unless the vertebral dislocation is so great that the spinal cord must have lost its continuity.

An improved surgical technic, especially regarding the team-work between operator and assistants, has been a large factor in lowering the mortality of neurological operations, not only because of the loss of blood avoided, the duration of the operation lessened, and thereby the shock minimized, but because the risk of infection is also proportionately diminished to a point practically *nil*. Naturally, intracranial operations should not be hurriedly done, but they can be quickly and, at the same time, smoothly and safely performed. There is, surely, no advantage to be obtained in prolonging the operation, either on account of faulty technic or as a result of such a technic so complicated that the final closure of the wound is delayed many minutes. It is rarely necessary for the team to consist of more than the operator, two assistants, and a nurse; but the anesthetist is a very important member, for many disasters in cerebral surgery have been due to faulty anesthesia.

The third important factor in the progress of neurological surgery during the past decade has been due to a better understanding of the neurological condition at operation both by the surgeon and the neurologist at his side. Formerly, the surgeon knew little, if any, neurology, and the neurologist knew little, if any, surgery. The result was poor team-work, and thus frequently the surgical judgment was not the best. Today the surgeon should have at least a practical knowledge of neurological principles, both anatomically and physiologically; and, naturally, a training in neurological pathology is most essential. In this manner a number of mistakes in surgical judgment may be avoided. If the patient cannot be benefited, by no means make the condition worse by an operation.

One of the most important aids to an increased knowledge of neurological lesions, particularly of the brain and of the spinal cord, has been the observation of the living pathology at operation; and, if death should occur, then the careful study of the tissue itself at autopsy. During the past three years permission for autopsy has been obtained before operation in each of my cases (both ward and private patients) of neurological surgery, no operation being performed unless such permission is given in writing, so that,

if death should occur, then we shall ascertain the cause of death, and also the accuracy of the diagnosis and the treatment for the benefit of future patients. Naturally, when an operation is advised, it is in the belief that the patient will not die; but in case of death it is absolutely essential for the benefit of other patients that we ascertain the cause of death in order that similar mistakes at least may possibly be avoided. I know of no means so enlightening to the doctor regarding the accuracy of diagnosis, particularly of intracranial conditions, as post-mortem examinations. Besides the benefit of such knowledge to one's future patients, there is a marked tendency for these examinations to make the doctor humble as to his real knowledge and to keep him in that mental attitude.

If neurological surgery consisted chiefly in the removal of brain tumors it would be, indeed, a most discouraging field of endeavor. As you know, almost 80 per cent of tumors of the brain are malignant; and, even though a surgically successful removal of the tumor is possible, the end-results are the same,—the pitiful condition of the patient is merely prolonged. The severe headaches, however, and the impairment of vision are thus temporarily relieved, and even prevented, by an early operative removal of the tumor. No patient should be allowed to become impaired visually from the increased intracranial pressure due to the growth of an intracranial tumor merely because the tumor cannot be located. All of these patients should have an early decompression to relieve this increased intracranial pressure so that the vision will be spared, and then, if the tumor does locate itself, a successful removal of the tumor may be possible, and yet the patient is not blind. I wish to emphasize this point, for it is most discouraging to operate upon those patients of brain tumor who have become blind.

Tumors of the spinal cord, on the contrary, are much more favorable, in that there is less liability of their being malignant. They can be more accurately located, and are much more accessible surgically. The operation of laminectomy has become much less formidable within the past few years, so that an exploratory laminectomy of a suspected spinal-cord tumor should always be advocated early in order to anticipate any permanent damage of a transverse myelitis due to compression. The frequency of benign dural tumors of the spinal cord is very hopeful.

The condition of brain abscess has always been a very grave one. It usually results from an otitis media with its subsequent involvement of the

mastoid; and the usual site is the contiguous temporosphenoidal lobe, or, less frequently, the adjacent cerebellar lobe. Lesions of the cerebellum can be much more accurately diagnosed than those of the temporosphenoidal lobe; therefore, if we can rule out a cerebellar abscess, then the site must be the temporosphenoidal lobe, which is a comparatively silent area of the brain, especially the right lobe in right-handed patients. Formerly the otologists, in cases of suspected abscess of the temporosphenoidal lobe, would puncture the dura in search of the abscess through the "dirty" infected field of the mastoid; but, as all operations for brain abscess are really exploratory procedures, it is distinctly unsurgical to open the clean subdural spaces and to puncture the cerebral cortex itself through an infected area. If the abscess is not located—and this frequently happens—then the patient runs the great risk of a resulting meningitis, and thus the usual occurrence,—the exitus of the patient. Besides, the dura should not be punctured blindly with a knife or puncture-needle unless the dura has been opened so that it can be clearly ascertained whether an underlying cortical vessel is present or not. Many disasters from the resulting hemorrhage have frequently occurred from such procedures. It is much more rational surgically, and a much better exposure is thereby obtained, to locate the abscess if the operative incision is made through the "clean" subtemporal decomposition, the vertical incision naturally being used. If the abscess is found, then it can be satisfactorily drained through the lower angle of the incision at the base of the skull; and if the abscess is not found then at least a decompression has been performed so that the intracranial pressure is relieved until the abscess may locate itself clinically, and the great danger of a meningitis and infective meningo-encephalitis has been avoided. In my series of brain-abscess cases there are a number which, I am sure, I should have missed surgically if I had not used the better exposure of the sub-temporal route.²

The condition of cerebral spastic paralysis occurring in children is a most interesting study. In 1843³ Mr. Little, of London, in his first monograph upon this subject, stated that these cases were due to a lack of development of the cerebral tissues, and also to an earlier meningitis; however, he did mention that this condition apparently followed in some cases of difficult, if prolonged, labor with or without the use of instruments, and was, in his opinion, undoubtedly due to an intracranial hemorrhage. It is very interesting

to note that in his second monograph upon this subject, written nineteen years later, in 1862, he states that, in his opinion, three-fourths of these cases of cerebral spastic paralysis in children are due to hemorrhage. These observations have been confirmed recently by more modern methods of diagnosis. It was formerly believed that hemorrhage in these cases caused a primary destruction of brain tissue; therefore no regeneration was possible, and thus an operative procedure would be of no value in treating the condition. Within the last five years I have had the opportunity of examining and treating personally over 1,600 children having the condition of spastic paralysis. By the more accurate methods of differentiating the ones due to hemorrhage from those hopeless cases due to a lack of development and to a former meningo-encephalitis, for which nothing really can be done, it is now possible to differentiate the ones due to hemorrhage from these two conditions by means of careful ophthalmoscopic examinations of the fundi of the eyes and by a measurement of the pressure of the cerebrospinal fluid at lumbar puncture by means of a spinal mercurial manometer. If the ophthalmoscope reveals the signs of a definite increase of the intracranial pressure, and these observations are confirmed by the spinal pressure indicated by the mercurial manometer (the normal pressure of the cerebrospinal fluid is 5 to 9 mm. of mercury), then we have an increased intracranial pressure; and if this pressure is relieved permanently by a subtemporal decompression and its modifications according to the condition of the underlying cortex as ascertained at operation, then a definite improvement results in these patients, physically and mentally. In about 20 per cent of the above-named series of over 1,600 patients there was an increased intracranial pressure; that is, in about one out of every five patients examined, and these are the ones, and the only ones, that can be benefited by an operative procedure. I have now operated on 339 of these children with a mortality of 34 patients (that is, 10 per cent), and the results have been very encouraging. Naturally, the younger the child, the better the prognosis, the first few days of life being the ideal time for the operation, although most of the children were between four and six years of age; the oldest patient, however, was 23 years of age, and a slight improvement resulted. Naturally, a sufficient period of time has not yet elapsed for us to ascertain the ultimate condition of these patients following operation, but their improvement has been so uniform and con-

tinuous in the younger children, and the pathology of the condition is a hemorrhage *upon* the cerebral cortex and not *in* the cortex itself (in only 18 patients was the hemorrhage in the cortex or beneath the cortex), so that both the physical and mental impairments are merely the secondary results of the increased intracranial pressure due to this supracortical hemorrhage.

The condition of hydrocephalus has been a very interesting one, in that it has now been ascertained that the type of internal hydrocephalus is comparatively infrequent and that the type of external hydrocephalus is the usual condition in these patients. They both result from an earlier meningitis (if we exclude the cases of internal hydrocephalus due to tumor-formation at the base), and the condition is therefore a diffuse one. If the ventricles are blocked by adhesions or exudate in the aqueduct of Sylvius or at the foramen of Majendie and Luschka, then an internal hydrocephalus occurs; but, if no such blockage is present, we shall yet have produced an external hydrocephalus, because the cerebrospinal fluid cannot escape from the cerebrospinal canal through the blocked stomata of exit in the cortical veins, sinuses, and lymphatics. The methods in the past, and occasionally now advocated, of connecting the ventricles with the subdural spaces by means of tubes are therefore of little or no value in the treatment of this condition, even though the lumen of the tube should remain patent—and it rarely does—and even if the condition is one of internal hydrocephalus, which is much more rare than that of external hydrocephalus, yet such an operative procedure will merely change the condition of internal hydrocephalus to one of external hydrocephalus, and therefore little or no improvement can be expected. The method recently used for draining the ventricles in cases of internal hydrocephalus and of draining the subarachnoid and subdural spaces in cases of external hydrocephalus by means of linen strands, is a much more rational procedure surgically than any of the methods used in the past, and its results have been very satisfactory; in the last report of 41 cases the mortality had been only thirteen patients.⁴

The condition of injury of the brachial plexus causing the so-called brachial birth-palsy, is the result of trauma to the plexus due to an over-stretching of its nerves by a forceful separation of the head from the shoulder at birth.

Undoubtedly, if the plexus has not been completely severed, but merely over-stretched, then many patients recover from the temporary paralysis of the arm; but in the children where the over-stretching has been severe, even to the point of a loss of continuity of the nerve-fibers, a permanent paralysis of more or less degree will result unless the scar tissue resulting from the hemorrhage in and about the plexus is removed and the ends of the torn nerves are anastomosed by an operation. If the arm is completely paralyzed at birth so that not even the upper arm or the fingers can be moved, then the ideal time for operation is at one month of age (no anesthesia is necessary); if, however, the fingers or the upper arm can be moved slightly at birth, then we should wait until three months of age, and, if no marked improvement has occurred within this time, then the operation should be performed. In these cases I usually have the mother bring the child to the hospital in the morning, operate upon it, and then have the child taken home in the afternoon. The operation is not a difficult one technically, and there have been no deaths in a series of 136 cases.⁵ These patients should not be allowed to reach the age of six years or older without an attempt being made to improve their condition by an operation; the best results have been obtained in children under one year of age.

In fractures of the spinal column I feel that, unless we can prove absolutely that there is a complete severance of the spinal cord or that the spinal cord has been irreparably contused, we should give the patient the benefit of an exploratory laminectomy within a short time after the accident, in order to remove any bony compression, hemorrhage, or edema of the spinal cord, and thus increase the patient's chances of a greater ultimate recovery of function. Frequently patients whom we consider to have suffered a complete severance of the spinal cord with complete loss of sensation and motion beneath the site of the injury, after three months, six months, and even longer, begin to recover their sensation and also motion of the extremities (a wiggling of the toes) formerly completely impaired. These patients are the ones upon whom an early laminectomy should have been performed, and thus the ultimate improvement would have been much greater than can be obtained at this late date. The operation of laminectomy is no

longer the formidable operation of the past, and its use should be much more frequently advocated than at present. These patients are the most pitiful ones, the end-result, unless something can be done for them, being but a miserable existence of a few years.⁶

In the diagnosis and treatment of brain injuries, there are four factors that must be emphasized:

1. The intelligent use of the ophthalmoscope. The direct method having the electric battery in the handle of the instrument makes accurate examinations not only possible, but much easier than the old indirect method. Every practitioner should become so skilled in the use of the ophthalmoscope that the condition of "choked disks" would be easily recognized and the earlier stages of blurring and edema of the optic disk margins and the so-called papillo-edema would be ascertained as early as possible. It is rare for "choked disks" to result from a brain injury unless the intracranial hemorrhage is of large amount and of slow formation.

2. The accurate measurement of the pressure of the cerebrospinal fluid at lumbar puncture by means of the spinal mercurial manometer. Not only will the presence of blood in the cerebrospinal fluid be ascertained by this procedure, but the all-important consideration,—the presence or absence of a marked increase of the intracranial pressure, whether it be due to hemorrhage or edema. A pressure above 20 mm. of mercury (normal being 5 to 9 mm.) indicates a pressure too high for the patient to withstand with safety, both as to immediate recovery and as to future complications, such as the well-known post-traumatic conditions. These are the patients upon whom a cranial decompression should be performed early, as being the safer procedure; however, less than one-third of the patients having brain injuries show a marked increase of the intracranial pressure, and therefore only these patients are operated on. The remaining two-thirds of the patients who do not have any increase of the intracranial pressure naturally are not, and cannot be, benefited by any cranial operation, and it is these patients who make excellent recoveries under the expectant palliative treatment of absolute quiet, an ice-helmet *surrounding* the head, and catharsis.

3. The knowledge that the fracture is possibly the most unimportant detail in the treat-

ment of brain injuries; that is, if we exclude depressed fractures of the vault, which should always be elevated or removed. It is not so much a question, in the treatment of brain injuries, whether the skull is fractured or not, the main consideration being the presence or absence of an increased intracranial pressure. Naturally, if the fracture has extended through the cribiform plate of the frontal bone or through the petrous portion of the temporal bone, allowing blood and cerebrospinal fluid to escape from the nose and ear, respectively, then the great danger of infection must be considered, the treatment, however, being to let the ear and nose alone rather than trying to render them aseptic, which results in introducing infection into the nose and ear, respectively. It seems in many patients that the more extensively the skull is fractured the less grave is the condition of the patient on account of the escape of intracranial blood and edema through the lines of the fracture, nose, and ears, so that the patient really "decompresses" himself, and by this means lessens the intracranial pressure; and, on the contrary, very frequently when the skull has not been fractured at all, the autopsy reveals a large intracranial hemorrhage and edema, the brain being water-logged, as it were, as the result of the high intracranial pressure causing a medullary compression and eventually medullary collapse with the usual result,—the death of the patient. No patient should be allowed to wait "over night" merely to obtain an x-ray picture of the skull, for the treatment remains the same whether the skull is fractured or not.

4. Less than one-third of the patients having brain injuries, with or without a fracture of the skull, have a marked increase of the intracranial pressure, and therefore these are the only ones upon whom an operation should be considered.

If an operation is deemed advisable, when should it be performed? We now know there are two times when no operation should be performed:

- a. During the period of initial shock when the pulse-rate is over 120. Any operation during this period of shock is merely an added shock to the patient, and, if the patient recovers, he recovers in spite of the operation. No patient, under any circumstances, should have a cranial operation performed during this period of severe shock.

- b. The second period when no cranial operation should be performed is the terminal stage of extreme intracranial pressure,—that is, the stage

of medullary edema and collapse. Clinically, this stage is easily recognizable by the rapid ascent of the pulse- and respiration-rate, which were very much decreased and of the irregular Cheyne-Stokes type of medullary compression, so that the pulse-rate rapidly becomes 130, 140, and even higher, and the respiration-rate 40 and above. This is the second period when no cranial operation should be performed, for these patients all die, operation or no operation; in fact, the exitus is really hastened by the operation. This period can always be anticipated by careful and accurate examinations of the patient, and the operation of cranial decompression and drainage advised before the patient enters this most dangerous condition.

The end-results of brain injuries, unless the patients having a high intracranial pressure are relieved by operation, are very discouraging in many cases. The post-traumatic conditions of persistent headaches, changes in personality, and even epilepsy in its various forms, are of very frequent occurrence in these patients. I have discussed this in detail elsewhere.⁷

Besides these neurological conditions frequently benefited by operative procedures, there are still other ones in this field that can be only mentioned in the present paper. The excellent results obtained in those cases of persistent trifacial neuralgia which finally, after the failure of all medical efforts, have had the posterior root of the Gasserian ganglion severed, are possibly the most dramatic. Surgery of the peripheral nerves has also made a marked advance within the past few years, and especially is this true of the operative treatment of selected cases of facial paralysis. Of the other neurological conditions amenable to surgical treatment, this work is still in the experimental stage.

REFERENCES

1. Archives of Ophthalmology, Vol. xvi, No. 4, 1917.
2. The Laryngoscope, St. Louis, March, 1914.
3. New York State Journal of Medicine, October, 1916.
4. Journal of the American Medical Association, March 18, 1915.
5. American Journal of the Medical Sciences, April, 1917.
6. Journal of American Medical Association, May 13, 1916.
7. Journal of the American Medical Association, May 13, 1916.

REPORTS OF CLINICS GIVEN DURING MINNEAPOLIS CLINIC WEEK—APRIL 8-12, 1918

IN THREE PARTS—PART II

CITY HOSPITAL

DR. C. A. DONALDSON

Röntgen Clinic—

CASE 1.—Man, aged 58. Had stomach distress for several months with marked loss of weight. Barium meal showed a small stomach with moth-eaten appearance over the pyloric portion and a six-hour residue of one-fourth of meal.

Diagnosis: Inoperable carcinoma, which was confirmed at operation.

CASE 2.—Man, aged 35. Complained of dull pain two hours after meals with moderate loss of weight. Barium meal showed a steer-horn-shaped stomach. Normal in position, shape, and peristalsis, with no six-hour residue. Palpation discovered no definite tender point. Röntgen examination, negative.

CASE 3.—Man, aged 60. Had difficult and painful breathing. Screen examination showed a large aneurysm of the ascending arch, which reached three and one-half inches to the right of the midline. The density of this shadow indicated a thickened aneurysmal wall. Wassermann, positive. Has improved under potassium iodide.

Following the exhibition of cases a plate-demonstration was given and stereoplates of chest-cases and various joint lesions were exhibited.

DR. ARTHUR T. MANN

(Continued from last issue)

Transplant of a rib for pathological fracture of the femur.

CASE.—This patient suffered from a broken back, at the third lumbar vertebra, sixteen years ago. At first both legs were paralyzed, as well as the bladder and rectum. He regained control of the bladder and the rectum, and at the end of three years he was just able to stand and to move about a little on crutches when both legs were supported by braces. After that he gained a little more control at the hips, but that was all. His legs and feet were anesthetic, and he began to have pressure sores on his feet. Later he began to have successive osteomyelitic foci in the small bones near the pressure places on the outside of his right foot, and he lost, gradually, the metatarsal of the little toe and the cuboid bone. Last year the same process began in the left foot. These, of course, were the results of trophic disturbances and pressure. It was thought that he could get along better without his feet and with artificial legs, as he was now a constant inmate of the hospital. Amputation of both legs at the point of election was now performed without any anesthetic under the true spinal anesthesia of his broken back. He was then self-supporting, earning his living as an elevator boy and going about on crutches and one artificial leg.

Some months ago, while turning around in an awkward position, he felt his hip break on the side of the artificial leg. At the City Hospital, we found an intertrochanteric fracture of the right femur. The x-ray plates of both femurs showed them to have undergone a change to osteoporosis under the trophic disturbances due to his broken back. At the end of three months there was non-union, and the fracture was freely movable, with very little new bone callus. I suggested to him the possibility of a bone-graft for healing the fracture, though I told him that we could not promise union in his case because the fracture was a pathological fracture and the femur showed osteoporosis, but that it was the best thing that we could do. He finally asked me to try the bone-graft.

Now, the problem was where to get the bone for the graft, as both femurs and the stumps of the tibiae and fibulae all showed osteoporosis. I decided to take a rib for the graft. It would be above the point of the fracture in the back, and it showed no pathological changes. This was done. Four inches of rib were removed with the external surface still covered with periosteum and the internal surface stripped bare. This was fitted into a groove which had been made for it in the femur across the line of fracture, and was fastened with four sutures of kangaroo tendon firmly into place, with the bare bone of the rib toward the bare bone of the groove in the femur, and the periosteal side toward the periosteal side of the femur.

This was done so that bone could grow to bone, on the one hand, and, on the other, the blood-vessels of the periosteum and soft parts could rapidly unite with the blood-vessels in the periosteum of the rib, which already connected with the blood-vessels throughout the bone of the rib. In this way it could receive its nourishing blood supply in the shortest time possible. The transplant was a success. There was union at the point of fracture three months from the operation. This union was demonstrated before the clinic and the x-ray plates were shown.

Fracture of the jaw.

CASE.—This patient had a double fracture of the lower jaw from violence. The loose fragment lay between a fracture near the angle of the jaw on the left, and a fracture to the right of the median line in the front. It was displaced downwards and rotated inwards—downwards by the pull of the geniolyoid, mylohyoid, and digastric muscles, and was pulled inwards by the mylohyoid. It was difficult to put into place, and difficult to hold in place. The best method to use is evident when one realizes that the upper jaw is the best splint we have. If we can fasten the teeth of the lower jaw to the teeth of the upper jaw, the fragments will be drawn into place; and the jaw, when it is healed, will be in line and will fit what it ought to fit,—the grinders and incisors of the upper jaw.

This can be done if one will select two teeth in the upper jaw which are opposite two teeth in the lower jaw at two different places. A linen thread is better than wire. A medium-sized curved needle is inserted through the gum between each of two teeth above the bulge of the crown, around one tooth and forward through the gum, across this tooth and back between the teeth, behind the second tooth and forward through the gum, and across in front of this tooth to the point of beginning, and the two ends are drawn snugly and

tied in the middle with one end above and one below the thread which crosses between the teeth. This leaves two threads above and two below at two different points in the jaw, and the harder they are pulled upon the tighter they bind upon the teeth. If the jaw comes up straight, the two threads above are tied to the two threads below at the two different points in the jaw and with the jaws closed. If there is a tendency to displacement of the fragments to the left, one of the threads above at the right is tied diagonally to one of the threads below at the left while the jaw is held in a corrected position, and vice versa. The remaining threads are tied vertically to hold the jaws closed. A bandage is applied about the head and jaw to remind the patient not to jerk on the threads. If well applied the tying will last until the jaw is healed. All liquids and semisolids can be drawn in between the cheeks and about the back teeth so there is no trouble with feeding or with mouth-washes. When there is separation of the fragments a double figure-of-eight can be put about the teeth on either side of the fracture line, in addition to the method given above. This will draw the anterior fragments snugly together without loosening the teeth at the end of the fracture, but will hold them firmly in place. As a rule they become firm again with the healing of the fracture. The fracture in this case came together perfectly, but only after taking more pains than is usually necessary with the above method. The simplicity of the materials used appeals to one, for they may be obtained anywhere. If one does not have the proper needle, an ordinary sewing needle may be used, and, if it is too long, it may be broken in two and the eye end used backwards. The method is of great service because it is most applicable to the worst cases, those which otherwise would need special interdental splints and special appliances, or an open operation.

Sarcoma of the femur, with resection and bone-graft.

CASE.—This young woman late last summer complained of some pain in the left knee. Nothing was found except a small tender point in the edge of the cartilage over the joint surface of the femur. She was given salicylates, and the trouble gradually subsided. About three weeks later she again complained of pain. The salicylates gave almost no relief. A careful examination was made to determine any source for a rheumatic or other infection, but none was found, so she was put in the hospital for a careful study.

The teeth, tonsils, throat, accessory sinuses of the nose, kidneys, bowels, and blood—all proved negative, and gave no clue. The Wassermann test was negative. The pain continued meantime, and was sometimes quite severe and nearly always present, but it had moved up to a point a little above the outer condyle of the femur, and this point was noticeably tender though nothing abnormal could be felt. An x-ray picture showed a low swelling at this place on the outside of the femur, and this swelling showed bone spicules in a moderately curved, slightly raised mass, still covered with the periosteum. The suggestion from this was a superficial osteomyelitis or osteitis with a sequestrum, but the length of time seemed entirely too short to make this probable. Ten days later a second x-ray showed the mass to have increased about three times in thickness and to have extended in area. The bone spicules had also increased in size. The increase in size in this short period of time and the growth of bone spicules

in the diseased area made the diagnosis of periosteal sarcoma almost sure. As we know, the periosteal sarcoma commonly has spicules of bone growing inwards from the periosteal covering.

A definite diagnosis of early sarcoma of the femur was made after considering all the possibilities, and ruling out lues. Usually the treatment would be high amputation in the thigh or, better yet, disarticulation at the hip; but it seemed as though we had made the diagnosis of one of the earliest cases on record and that it was quite likely that the process was still localized, so that we might escape from the high mortality of one of the fatal types of sarcoma. I proposed a resection of the tumor-bearing portion of the femur and a replacement of this portion with a bone-graft from the tibia of the opposite leg. This was finally accepted.

At operation, I proposed to make sure of my diagnosis first. For this purpose I arranged for two complete sterile outfits and the full Lane technic where no hands and nothing that has touched the hands enter the field of operation. With the first outfit an incision was made down somewhat near to the periosteum, and the tissues were retracted. Through this field with knife and chisel, gently used, a piece of the tumor was removed, and handed to the pathologist. The field from which this piece was taken was immediately soaked with 95 per cent carbolic acid for one minute and then with 95 per cent alcohol. An alcohol-soaked sponge was left in the wound while nurses and assistants changed gowns, gloves, table-covers, and instruments. After a time the pathologist brought in the report of sarcoma, but the exact cell-type could not be stated even on further study.

Now, carefully avoiding the field from which the specimen had been taken, we circled the femur leaving a layer of fascia and muscle attached to it like a skin about an orange, and sawed the femur across at two points well away from the tumor, one just above the condyles at the knee and the other well up in the thigh. This we replaced with a graft eight inches long, taken from the crest of the opposite tibia, one end of which was inserted into the medullary cavity above and the other into the cancellous tissue above the condyles below. This restored the femur to its full length.

Some interesting accidents happened afterwards.

The leg was put up on a molded plaster-of-Paris splint and onto a series of suspension pulleys. The patient was hysterical and uncontrollable, and during the first night tore the dressings off, and the leg was found out of place. Later an x-ray showed that she had broken the bone-graft near where it entered the femur above, and had bent her knee enough to pull the lower end out of the cancellous tissue below so that when the leg was put into line the lower end rested on top of the periosteum of the lower fragment of the femur and beneath the quadriceps tendon and joint tissues, but the length of the limb was preserved.

In time the fracture of the bone-graft healed, and there was firm union at the upper end of the graft. The lower end was slow to unite, although the x-ray showed that some bone callus was being thrown out around it. About five months after the operation the patient had a fall, and again broke the graft and its callus just below the upper fragment of the femur. The callus showed, in the x-ray, a cone of bone about

one and three-quarters of an inch long, growing down from the femur and about the graft. The base of the cone was the size of the femur. This grew into a firm union in eight weeks, which is the length of time it takes an ordinary fracture of the femur to become solid.

The misplaced lower end of the graft failed to show bony union at the end of eight months. This was because the periosteum lay between the graft and the femur, preventing a free direct union. Of course, union was possible by a callus growing from the end of the lower piece of the femur and up to the graft, but, while some callus showed in the x-ray plate, there still was motion at this place.

I considered it wise to replace this end of the bone-graft into the cancellous tissue above the condyles by an open operation, and this I have recently done without much difficulty. We might have obtained union in from three to nine months more, but, if we did not, we should still have had to do the operation and should have lost the months of time, besides this the bone-graft will now have an earlier chance of union and an earlier chance to grow thick enough to support the weight of the body. The history of most bone-grafts is that they grow to about the size of the bone into which they are grafted.

Tuberculosis of the tendon-sheaths of the wrist and hand.

CASE.—About four months ago the patient, a man, noticed some tenderness, on movement, in the wrist, which later extended into the palm. The tenderness was fairly constant, but not severe. Pressure over the palm would increase the swelling over the anterior aspect of the wrist, with the elusive sensation of soft, slipping rice bodies scarcely felt.

DUNWOODY NAVAL TRAINING-SCHOOLS

DR. G. M. OLSON

ASSISTANT SURGEON U. S. N. (RET.)

Visitors were shown the various methods in naval medical administration in the office, sick bay, and dispensary. Methods of handling and transporting the sick were demonstrated by means of the litter or stretcher and the new and very satisfactory Ford ambulance.

FAIRVIEW HOSPITAL

DR. N. H. SCHFLDRUP

(Continued from last issue)

CASE 15.—Mrs. H., aged 35. Has always been in good health except for rheumatism last eight years. About six years ago she developed pain in region of the spleen, which radiated up into the left side of neck. There are small glands about the size of a walnut on both sides of neck; the ones on left side more or less tender, on right side not painful at all. She had difficulty in breathing and complains of a great deal of dyspnea at night after retiring. Urinalysis: albumin and pus present, no casts. Blood-pressure: systolic 110, diastolic 88. Blood-examination: 2,200,000 reds, hemoglobin 45 per cent, leucocytes 8,500. Diagnosis: pseudoleukemia.

Treatment: x-ray treatment of glands, together with sodium cacodylate in ascending doses, and benzol, five minims in oil, by mouth. Operation was advised to relieve the dyspnea. The glands were excised. Radical operation: x-ray and medical treatment continued. Greatly improved. Wound healed nicely.

CASE 16.—Mrs. H., aged 29. Complained of pain in lower abdomen with considerable flowing for last three weeks. Gives history of miscarriage three weeks ago. Bimanual examination reveals large mass in uterus. Diagnosis: retained placenta. Treatment: uterus dilated, old adherent placenta removed, iodoform applied. Recovery.

CASE 17.—Mr. M., aged 23. Complains of nausea and gas formation after eating, constipated, tired and weak. Physical examination: slight mitral regurgitation, slight dullness over right apex, distinct pain upon pressure over McBurney's point. Diagnosis: sub-acute appendicitis. Operation: appendectomy; appendix very much enlarged and adhesions liberated. Stump treated with carbolic and alcohol. Incision closed. Recovery.

CASE 18.—Miss K., aged 18. Has complained of gastric symptoms for several months, lost ten pounds in weight, constipated, tired, weak, nervous and sharp pains through the lower abdomen. Urinalysis, normal. Blood-examination: hemoglobin 80 per cent, leucocytes 9,800. Blood-pressure, normal. Distinct pain over McBurney's point. Diagnosis: chronic appendicitis. Treatment: appendectomy, adhesions and Lane's kink liberated. Recovery.

CASE 19.—Mrs. T., aged 33. Five years ago had appendix removed, also operated upon for uterine trouble, a week later had a severe attack of colicky pain in the region of the gall-bladder and vomited a large quantity of bile. Had such attacks every two or three weeks; and on November 19, 1918, had a cholecystotomy performed, one large stone removed, considerable pus present. Two months after this operation had a colicky pain again in the region of the gall-bladder and has had attacks very frequently since. Stomach feels distended and distressed especially after eating, very constipated, does not sleep well, lost a good deal in weight. Urinalysis: albumin present, no casts. Blood-pressure: systolic 105, diastolic 80. Blood-examination: hemoglobin 70 per cent, leucocytes 8,500. Stomach examination: free hydrochloric acid 55. X-ray examination, negative. Diagnosis: cholecystitis with adhesions. Treatment: cholecystectomy was performed, the gall-bladder was white and small, greatly inflamed with extensive adhesions, liberated, drainage tube attached to cystic duct. Recovery.

CASE 20.—Mrs. D., aged 30. Mother of four children. For last year has been flowing excessively and every two weeks, feels very weak, nervous, emaciated, constipated, headaches, backache. Urinalysis: albumin and hyaline casts. Blood-examination: hemoglobin 60 per cent, leucocytes 6,000. Blood-pressure: systolic 100, diastolic 80. Physical examination reveals fibrosis of uterus. Treatment: hysterectomy was performed. Specimen examined and found to be fibroid degeneration. Recovery.

CASE 21.—Mr. J., aged 24. Four weeks ago had pneumonia of right lobe, went through the crisis but has not been able to regain strength, breathing is difficult and runs a temperature of 101.5 every afternoon. Pulse 120. Urinalysis: albumin and hyaline casts. Blood-count: hemoglobin 70 per cent, leucocytes 11,000. Blood-pres-

sure, systolic 120, diastolic 85. Upon percussing the right chest, dullness is found everywhere. Diagnosis: empyema. Treatment: a needle was inserted for diagnostic purposes, no pus was found. One week later a needle was again inserted and pus was found. Treatment: rib-resection and drainage. He is still under treatment.

CASE 22.—Mrs. O., aged 45. Came to the hospital eight months ago with a well developed exophthalmic goiter, but condition was so bad the goiter could not be removed. Ligation of the right superior thyroid artery. Waited another week and artery was ligated on left side. She was sent home and in six months had gained thirty-five pounds in weight. She still has symptoms of thyroïdism, pulse very rapid, tremor, bulging of eyes, very nervous. Urinalysis: albumin, hyaline and granular casts. Blood-examination, negative. Blood-pressure: systolic 133, diastolic 75. Diagnosis: exophthalmic goiter. Treatment: Thyroidectomy. Small rubber tube drainage. Recovery.

CASE 23.—Mr. J., aged 42. Has always been quite well except for asthmatic spells, but one year ago noticed pains in stomach a little to left of median line. The spells have come on more often of late and on three occasions he vomited sour smelling stuff. Pain immediately after eating. When stomach is empty feels best. Cannot eat meats or fats, stomach bloats up and has considerable gas formation, bowels move well, has lost twenty-five pounds during the last year. Urinalysis: normal. Blood-count: hemoglobin 65 per cent, leucocytes 11,000. Blood-pressure: systolic 110, diastolic 80. Stomach-examination: no free hydrochloric acid present, lactic acid present, blood present, B. O. bacillus present. X-ray examination: shows a tumor of the stomach with pyloric obstruction. Diagnosis: cancer of the stomach. Operation: upon exploring the stomach, three-fourths of stomach was involved in cancerous mass with secondary infection of pancreas, and glands were enlarged everywhere. In order to give relief, an anterior gastro-enterostomy was performed with Murphy button inserted. Patient died on the third day from exhaustion.

CASE 24.—Mr. R., aged 58. Has had considerable trouble for last four years, stomach feels very full after eating. Gets spells of pain, especially two years ago. After eating he vomits considerable every two or three days, pain on the left side of stomach, suffers a great deal from internal hemorrhoids and has lost considerable blood, lost twenty-five pounds during the last year. Blood-pressure: systolic 90, diastolic 40. Urinalysis, normal. Blood-count: hemoglobin 90 per cent, leucocytes 30,000. Stomach-examination: Ewald's test-meal, free hydrochloric acid 35, no blood or lactic acid present. Diagnosis: cholecystitis, appendicitis and hemorrhoids. Treatment: cholecystectomy, appendectomy, cystic duct drained, hemorrhoids removed with clamp and cautery. Recovery.

CASE 25.—Mr. C., aged 11. Been in the best of health up to seven months ago, when he fell and sustained an injury to left groin. Since that time has had considerable pain and a slight limp. Eight weeks ago a distinct swelling appeared in the left inguinal region extending down over the lower part of the thigh, four weeks ago this broke and he has had a running sore. Urinalysis: shows albumin. Blood examination: hemoglobin 75 per cent, leucocytes 13,000. Diagnosis: tuberculosis with mixed infection. Operation: a large incision was made

over the femoral vessels extending up to the left inguinal region, several large glands were removed, which had been infected, the deeper inguinal glands were all involved and infected, complete excision. Wound was cauterized with carbolic and alcohol and sewed up without drainage, patient was put on tuberculin treatment. Will recover. Pathological findings: tubercular mixed infection.

LYMANHURST HOSPITAL

DR. F. W. SCHLUTZ

Clinic on Infant-Feeding—

Chronic alimentary disturbances were discussed. Types of cases were shown in which the causative factor was over-feeding with cow's milk; others in which the factor was a summation of dyspepsia, eventually leading to atrophy; and finally a series in which the constitutional factor was responsible for the disturbance. The treatment of the various conditions was fully gone into; demonstration of food preparations.

NORTHWESTERN HOSPITAL

DR. ARTHUR E. BENJAMIN

CASE 1.—Miss M. S., aged 44; house-keeper; family history, good. Has had tonsillitis, is somewhat deaf in the left ear. Bowels constipated, and has indigestion. Sleeps fair, and is nervous and dizzy at times. Menses, regular, just over the last one, flowed six weeks. Some rectal trouble. Complains most of pain in stomach and metrorrhagia.

Examination revealed right tonsil submerged; stomach prolapsed, as well as intestines; uterus enlarged and retroflexed; she also has a few hemorrhoids. X-ray shows stasis and obstruction along the ascending colon. Urine is normal.

Under gas and ether anesthesia a median incision is made. The cecum is found very much dilated and prolapsed, as well as the ascending colon. The ileum is bound down as a Lane's kink about eight inches from the cecum in the pelvis; this is loosened up. A membrane at the upper portion constricts the colon somewhat. The Lane's kink twists the ileum. The appendix is not very bad, but is removed. A modified Gilliam operation is performed because of the retrodisplaced uterus. A fibroid as big as a hazel-nut is removed from the anterior wall of the uterus. Hemorrhoids and tonsil are to be removed later, as I do not believe it a wise plan to add to the risks and increase her discomforts in this case by more surgery now.

CASE 2.—Mrs. M. W., aged 56, widow; weight 195; family history, good. Pneumonia at 35; large cyst of the ovary removed two years ago; uterus has been completely prolapsed for a number of years.

Examination reveals this prolapse to a marked degree including the bladder. There is some erosion at the os. She also has a few hemorrhoids. Her blood and urine are practically normal.

In this case we will demonstrate a new operation for procidentia. Under gas and ether anesthesia a median incision is made just above the pubes. The uterus is dragged out of the wound, and the body of the uterus removed, leaving the lateral portions of the uterus and cervix, with the exception of the

mucous membrane, in the canal. These lateral portions are brought over the recti on either side and stitched as two flaps, completely suspending the bladder and remaining uterine tissue. The ovaries and tubes being atrophied are allowed to remain. The cervical canal is completely closed with plain catgut, and all bleeding controlled by suturing. A perineorrhaphy is then performed to make proper support. This has been a very satisfactory operation in my hands, and the patients have been comfortable thereafter, being completely relieved of their former symptoms.

CASE 3.—Mr. P. S., aged 33; married; farm laborer. In October, while working on the farm the right humerus was injured by a corn-shredder, producing a compound comminuted fracture. I operated upon this man February 12, 1918, on account of non-union. An x-ray showed the two fragments about one-fourth of an inch apart at that time. We did a plating operation after removing all of the soft tissue, which was fibrous in nature and prevented the union. We brought the two fragments in apposition. It was impractical in this case to do a bone-grafting operation owing to the fact that the musculo-spiral nerve could not be brought in such a position that we could do such an operation.

The six-screw steel plate was then fastened on to hold these fragments in apposition. It is now two months since this operation was performed, and the union seems to be fairly good. As it is my habit to remove all of these plates after a certain length of time, I think it would be wise to remove this plate in this particular case now. Incision is made in the line of the old scar, and the screws removed. The union is fairly good, but not as firm as we would like, for there seems to be some fibrous tissue. We are removing this, and placing in the cavity some bone-chips derived from a portion where splinters of bone became attached and are useless. With the addition of these pieces between the ends of the bone I feel confident we shall get firm union in time.

CASE 4.—Miss C. L. T.; dress-maker. The patient gave a history of having had ulcer of the left cheek a number of years ago from an unknown cause. The greater portion of the cheek sloughed away, and ankylosis of the left lower jaw resulted, with much scarring of the left side of the face. These defects have been more or less corrected by various operators in New Orleans and Chicago a number of years ago. She came under my observation in 1907, and at that time we made further corrections to obviate the necessity of wearing a plate covering up the defect in the left cheek. You will see that there still remains a small defect in the lip below the left nostril, which we shall endeavor to correct.

An incision is made to freshen the soft structure beneath the left nostril, the bone is denuded, and the tissue is brought together by linen and adhesive to take off the tension. An adherent condition of the soft structure of the inferior axillary is loosened up also to better the defect.

CASE 5.—Miss J. J., aged 48; widow. She has always been well up to about October, 1917, when she began to have ill-defined abdominal pain and constipation. Dr. Wittich suspecting a malignant growth referred her to me.

An exploratory operation was done February 2, at which time about six quarts of serum were removed. An irregular mass was found involving the uterus, ovaries, tubes, and broad ligaments. This proved to be malignant. A further involvement of omentum in the gall-bladder area was also found at this time.

We are intending to do a paracentesis to remove the excessive fluid which accumulates in like cases. We do this under local anesthesia (apothesine), very little pain being experienced. Considerable fluid has accumulated (about three gallons). After removing this we shall insert a small drainage-tube to make it unnecessary to remove this fluid right away, as it will keep on reforming.

CASE 6.—Mr. C. S. W., aged 44; sculptor.

This is a very interesting case because of the history of involvement of other structures, stones having been removed from the bladder by a New York surgeon a number of years ago. A nephrotomy was performed by myself to remove stones which filled the kidney. A nephrectomy was later done on account of the discharge from an old infection of the same kidney before the removal of stones. The kidney had been left because the opposite kidney was none too good, and thinking we might save the one containing the stones.

He also has a large hernia resulting from the cystostomy. He is now in fairly good condition, but still has some pus in the urine on account of a mild cystitis and possibly some involvement of the remaining kidney.

The tumor on the right hand which we are to remove under local anesthesia (apothesine) consists of ganglion arising from the tendon of the long flexor of the index-finger. This you see is completely and easily removed with the sac under apothesine.

CASE 7.—L. B., aged 9. Family history, good. No illness except the result of a poor tonsillectomy about four years ago, when the right tonsil was not taken out perfectly. Had tonsillitis six weeks after operation, with swelling of the lymphatic glands on both sides of the neck. Right side started to swell on Christmas day, and broke down five weeks ago discharging some. Under gas and ether anesthesia the left tonsil, which had been imperfectly removed before, is dissected out and the adenoid tissue removed. Tubercular glands of the right side of the neck are curetted, carbolyzed, and packed with iodoform gauze. A x-ray treatment following these operations is unquestionably of great curative value, and this we shall employ in this case.

CASE 8.—Mr. J. V., aged 54; farmer; weight, 113½ lbs.; married. Family history is good. Is weak and anemic now. Has been troubled with indigestion for about a year; eructations of sour gas; stomach sore and distressed; feels better when stomach is empty; is losing weight; bowels not very regular; sleeps poorly, troubled with gas during the night; scanty amount of urine; has bad teeth; tires easily.

Examination revealed the stomach about four inches below the umbilicus. Obstruction of pylorus evidenced by peristaltic waves of the stomach. Urine, normal. Blood-pressure, 100. Hemoglobin, 80 per cent.

Examination at the Northwestern Hospital on September 1, 1917. The colon was found greatly

dilated, and stomach prolapsed and obstructed by a circular mass at the pylorus, the total mass being 1½ inches in diameter. Kidneys, spleen, and other organs were normal. A posterior gastro-enterostomy was performed. Patient made satisfactory progress and has gained much in flesh and is able to work some now. I have insisted that he get his bad teeth pulled and a plate made, which will complete the cure, I am quite sure.

CASE 9.—Mr. P. L., age 50; married. Patient had hemorrhoids removed January, 1916. There remained at that time a ridge extending upward, which later broke down and contracted; and an ulcer resulted about three inches long from which he has suffered for sometime, with discharge of blood and pus.

June 9, 1916, the bowel was cauterized with Percy's cautery.

August 25, 1916, the anterior wall of the rectum was again cauterized, and the patient was in fair general health for a time, but the ulcer reappeared.

November 11, 1916, ether was administered. It was impossible to get above the growth in the rectum with the gloved finger. A laparotomy was decided upon, and an incision was made at the outer border of the left rectus, and a rubber dam was used to protect the intestines. The sigmoid was pronouncedly adherent. The adhesions were severed, bringing the colon up. A colostomy was done on account of the lymphatic involvement. The rectum was dissected and isolated. The bowel was ligated. After division by cautery the upper end of the rectum was then inverted by stitching it to a rubber tube which had been inserted in the rectum. The tube was then pulled down, inverting the loosened rectum to make easier dissection for the second operation. A second incision was made to the left of the first, and the severed end of the colon was then brought into the second wound. A four-inch rubber tube was stitched into the opening. The colon was stitched to the muscle and fascia.

November, 1917, under gas and ether anesthesia, the coccyx and part of the scrotum were removed. The growth in the bowel had involved the levator ani fibers, making it necessary to remove part of the fibers. The rectum was removed, including part of the sphincter.

The patient made a perfect recovery, and now seems well, weighing more than at any time before. The growth was malignant.

CASE 10.—Mr. J. E. M., age 55; farmer; married.

June 9th, while assisting in driving piles the der- ick fell, fracturing his pelvis, which resulted in rupture of the bladder and urethra. Swelling of the abdomen and perineum with severe pains; unable to be catheterized. X-ray shows a fracture of the pelvic bone near the junction of the pubes.

June 10, 1917, under cocaine anesthesia catheterization was possible, but no urine was obtained; a lot of blood was present. A suprapubic operation was performed; and a great deal of blood was obtained. The bladder was found ruptured at the anterior and lower portion. There was a hole in the bladder about 1¼ inches in diameter, produced by the fractured bone. The clots were removed, and three drainage-tubes were placed in front of and one in the bladder. This operation saved the man's life,

and the urethra was dilated occasionally afterwards. The patient has made a full recovery in every way as you see.

The following cases were also shown at this clinic:

Mrs. E. C. Repair of cervix and perineum, cur-
etting, adhesions. Cystic ovaries February 28, 1918.
Thyroidectomy for a large cystic colloid goiter,
March 8, under local anesthesia. The patient has
made very satisfactory progress.

Mr. J. E. C. Epithelioma of lip. Patient operated
on December 18, 1917, with very satisfactory cos-
metic results.

ST. BARNABAS HOSPITAL

DR. ARTHUR E. BENJAMIN

CASE 1.—Mr. F. B., aged 30, teamster, was run over
by a truck on March 21, fracturing the tibia and the
fibula at the junction at the middle and lower third. Two
attempts at reduction had failed, as the bone had been
splintered.

Under gas and ether anesthesia an incision is made
at the outer side of the left tibia. The lower fragment
is posterior to the upper, and there is a splinter at this
point, one and one-half inches long, of the outer and
posterior portion of the shaft. There are present also
two smaller irregular pieces. Considerable exudate
exists around the fracture. On account of the thin
condition of the shaft and the splintered condition of
the bone, a steel plate is to be used to hold the bone in
place, instead of an autogenous bone-graft. A four-
screw bone-plate is then fastened, holding the fractured
ends in apposition. It is unnecessary to do anything
with the fibula, for it has come into position. The
loose pieces of the bone are placed in proper location,
and the soft structures brought around the bone to hold
them in place. A small tube is used for drainage. I
am in the habit of removing these bone-plates after
they have served their purpose; therefore this one will
be removed later under local anesthesia.

CASE 2.—Mr. W. Z., aged 30, married, in good gen-
eral health, and family history good. He is an automo-
bile mechanic.

Three months ago, while working in a garage, a
generator exploded, resulting in a compound fracture
of the left thigh five inches above the knee-joint. This
wound became infected, so that he has had irregular
temperature, with chills and fever, resulting since in
a great deal of pus discharging from the wound on
the outer side of the limb. This wound was originally
about four and one-half inches in length. A cast was
applied at the time of the injury, which occurred in a
country village. When he arrived at the hospital here,
about four weeks after the injury, there was very much
shortening (about 3 and one-half inches) and over-
riding of the upper fragment. A great deal of pus was
discharging, and a swollen condition of the thigh ex-
isted. The suffering was very pronounced. The wound
has been treated by Dakin's method since the patient
came to the hospital, although it became necessary to
drain the wound by enlarging the opening and a second
opening is now present on the inner side of the thigh.
His temperature has been going down until today, when
he has a rising temperature again with some pain and
some additional absorption of pus. His leucocyte count

has gradually reduced, but is still 13,000, owing to the
possible acute exacerbation. We are not going to operate
today except to increase the possibility of drainage
and inject into the sinus Dichloramine-T or Dakin's,
which we shall continue for a time. He is wearing a
posterior splint with extension but this does not
lengthen the limb. We hope later to get the wound in
good condition so that we can obtain quite a serviceable
limb. We must wait until all infection has disappeared,
and the probability of further trouble from that source
has been removed before an operation is performed to
restore the bones to their proper position.

CASE 3.—Mr. E. K., aged 47, a drainage contractor,
married. While in a twenty-foot tile ditch a lump of
clay fell on his right leg, crushing and breaking it, re-
sulting in fracture at the junction of the middle and
upper third. Leucocyte count, 40,000.

On September 20, 1917, the limb was dark with gas
bubbling from the incisions. The x-ray shows gas cavi-
ties between the muscles and fascia very plainly and
distinctly marked. The fracture was an irregular one
and was one and one-half inches from the upper articular
surface of the tibia, and one oblique three inches lower,
the bone being in place in my anterior-posterior view. The
fibula was fractured two inches higher up and was
much out of line. The soft structures were swollen
and edematous, as shown in the x-ray picture. The
bacteriologic examination shows streptococci and staphy-
lococci and Welch's bacillus. An amputation was de-
cided upon. Potassium permanganate, 1-6,000, and
hydrogen peroxide were injected beneath the skin in
several places above the knee. A few places showed a
collection of gas. Numerous incisions were made above
the knee through the skin into the soft structure, and
tubes were placed through from one incision to the other.
The bursa above the patella was filled with a collection
of thick and infected blood, containing about six ounces.
The skin was incised below the patella, and the joint
opened. There was no bleeding until the severing of
the popliteal artery, which was ligated in four different
places, as well as the vein. The joint surfaces were
discolored, and showed signs of infection, but there was
no free pus. The patella was removed and the stump
left open for drainage. The wound was surrounded by
alcohol gauze packs, and later Dakin's solution was used.
The patient made good recovery, and was re-operated
on to give him a good stump.

Operation was done on December 27, 1918, under gas
and ether anesthesia. A long anterior flap and shorter
posterior one removed all of the new growth of skin
on the stump and thickened scar tissue. The flaps were
approximated with interrupted chromic catgut, with
sutures and a rubber tube at the angles for drainage.
The patient is very well, has gained in weight, and is
wearing a temporary artificial limb to harden the tissues
of the stump, and he will soon have a permanent arti-
ficial leg.

The following cases were also shown at this clinic:

Miss G. L., complete ankylosis of the elbow. The
patient was operated on about eighteen months ago,
resulting in very good motion.

Mr. O. A. A nephrectomy was done for the destruc-
tion of the left kidney from infection. The patient has
been well since, except some pus is still present.

Mrs. K. A. Thyroidectomy. The patient was oper-

ated on in August, 1915, for colloid goiter with very good results and very little scar.

Two methods of treatment are open for these cases: (1) fixation from three to six months with the hope that the low-grade tuberculous infection of the tendon-sheaths will subside, and (2) the open operation, in which the tendon-sheaths are opened rather widely, the rice bodies removed by gentle pressure and curetting, and sutured for healing by first intention after filling the spaces with iodoform emulsion. The Baer's passive hyperemic may also be employed as a curative measure with either method, and is often employed with the rest cure.

We operated on this patient about four weeks ago. There were many pearly, ovoid rice bodies in the tendon spaces of the wrist, and well down in the palm. All of these and the debris from the gentle curetting, were thoroughly removed and the iodoform emulsion injected before suturing. The wound has healed by first intention, then extruded a little iodoform and healed over. He is still on the splint and we do not yet know the final result.

Tuberculosis of the bones of the wrist, and tuberculous epididymitis.

CASE 1.—This young man showed considerable disorganization of the bones of the wrist in the x-ray plate and a slight swelling of the wrist with some pain on motion. Motion of the fingers was free and without pain. Tuberculosis of the wrist bones is very difficult to cure, and some surgeons advise amputation of the hand and wrist rather early. However, we have followed Moorhof, and have removed all of the diseased bones and have filled the cavity with the iodoform wax, and sutured the soft parts over it for healing by first intention. In this case all the bones of the wrist were removed except the bones at the ball of the thumb and the pisiform. The iodoform wax was spoken of in connection with the case of multiple osteomyelitis. (See above.) The cavity is disinfected with 95 per cent carbolic acid, followed with alcohol and carefully dried before the wax is introduced. The healing takes place first in the soft parts, and, as time goes on, the bone-wax is gradually replaced by bone-granulation, which grows in from any bone surface facing the cavity, until finally no wax is left. In about three months a fair-sized wax-plug is replaced by bone, and in all cases we expect a movable joint. It is very interesting to know also that this still takes place in cases which do not heal entirely by first intention. As a matter of fact, if much oozing is to be expected, we put in a small, short drain for one or two days. In this case a small portion of the wound failed to unite, but it is already granulating over and is nearly covered in. This is giving us no anxiety as they practically always soon heal over.

This man also had a tuberculous epididymitis, involving a portion of the testicle, and some points of thickening could also be felt in the vas. This was operated on the same day as the wrist. The testicle and vas were dissected up to the internal ring of the inguinal canal, and the vas deferens was further loosened beneath the peritoneum and then with a pair of hemostats it was wrenched away, and it broke, as it practically always does, near the base of the bladder. A modified Bassini was done to close the canal.

DR. H. G. FRANZEN

Splenectomy for hemolytic icterus—

Patient, a girl, aged 13.

Family history: Mother had left tubercular kidney removed. Afterwards developed empyema. Other family history, negative.

The patient came for examination in March, 1918; poorly nourished; skin dry and covered in spots with brownish scales; abdomen, distended; a large mass could be palpated in left hypochondrium extending below the umbilicus; liver, slightly enlarged; hemoglobin, about 50 per cent; urine, normal.

April 10. The spleen was removed; all vessels were secured by interlocking ligatures.

Patient recovered nicely from the shock, and in two weeks was able to be up and around.

DR. KANO IKEDA

Demonstration of Cases of Gastric Carcinoma—

CASE 1.—Mr. V., aged 58, had been troubled with "indigestion" without any definitely localized pain or significant symptoms for past six months; some loss of weight and weakness. During past two weeks he had to vomit every other day regularly when food previously taken was recovered. Could eat as usual. Had noticed a number of lumps measuring from size of a pea to that of a hickory nut under the skin over the body, particularly over the abdomen for three months.

A barium mixture was given at 5:00 p. m., and the patient was fluoroscoped on the following morning when the bulk of the mixture was still present in the stomach. The pyloric end stopped abruptly; no duodenal bulb present. An occasional antiperistalsis was noted. A small lump from the left forearm was removed and examined histologically. It was found to be a metastatic adenocarcinoma.

CASE 2.—A farmer, aged 55. Indigestion and gradual loss of weight and progressive weakness. Had been unable to work for some time. Gastric analysis showed absence of free HCl, the presence of lactic acid, etc. Clinical diagnosis of gastric cancer was made.

Upon fluoroscopic examination, the stomach was found to be entirely normal. At the pylorus, however, a constant filling defect about the size of a pea was present, and the duodenum showed some distortion of outline. Emptying time was normal. A diagnosis of probable beginning cancer was made.

At operation the pylorus was apparently normal under the examining fingers. The duodenum and gall-bladder were not abnormal. At the insistence of the röntgenologist, however, the surgeon made a vertical incision upon the pylorus, and immediately a small growth made its appearance. A pylorotomy was done, and the patient gained in health and strength and returned to work. The pathological report was adenoma (probably beginning adenocarcinoma).

CASE 3.—A man, aged 58, had always been well except for occasional attacks of "indigestion" for the past ten years, with some loss of weight and strength. Gastric analysis showed absence of free acid. Lactic acid and occult blood, present; also Boas-Oppler bacillus. Upon fluoroscopic examina-

tion, a definite and rather extensive defective filling and obscure outline over the superior border of the pyloric portion was noted. Emptying time was normal. Diagnosis of inoperable carcinoma was made.

Three months later another examination was made, and revealed the condition much more extensive than before. The patient went to another surgeon, who made an exploratory incision and found the case inoperable. The patient died in three days.

CASE 4.—A woman, aged 48; indefinite gastric troubles. An examination revealed a niche and shallow defect high up in the lesser curvature. From clinical and laboratory evidences which were typical, a diagnosis of carcinoma starting at the site of an old ulcer was made, and operation advised. No palpable tumor was present. Upon operation, the cancer was found to extend throughout the upper posterior wall of the stomach and to be fixed.

CASE 5.—A woman, aged 50, was brought in with a diagnosis of carcinoma of the stomach. Clinical symptoms and gastric analysis were confirmatory. An x-ray examination, however, revealed a stomach perfectly normal. Blood-examination showed a high color-index; hemoglobin, 40 per cent, with morphologic evidences of pernicious anemia.

Urinary calculi—

It has been found quite frequently that, in cases where a calculus is found at one locality of the genito-urinary tract, another stone or a group of stones may be encountered elsewhere in other parts of the tract. It has become quite imperative for the practitioner to inquire into the entire system whenever symptoms warrant the radiography for a possible calculus. The cases presented here illustrate the point quite conclusively because the discovery was quite accidental and unsought for by the physician.

CASE 1.—A man, aged 45, had suffered pain in the left side with definite urinary symptoms. A radiograph of the side showed two good-sized calculi in the left ureter about three inches from the bladder. The left kidney-plate showed a suspicious shadow on the opposite side of the spine. The right kidney contained a complete cast of the calyces, which apparently gave no acute symptom.

CASE 2.—Patient had been previously rayed for a small calculus in the left ureter. On the eve of operation, he was again radiographed at the hospital to ascertain whether the calculus had moved down or not. In spite of the patient, the opposite side was examined as a routine measure, and three pea-sized calculi were found in the kidney.

CASE 3.—Mr. R. presented himself with symptoms of a vesical calculus, which was found and removed by cystoscopic guidance with a long forceps through a small suprapubic incision under local anesthesia. The patient showed two small calculi in the kidney, which apparently gave no symptoms.

CASE 4.—It seems possible for deposits opaque to the x-ray to be removed during the course of ureteral catheterization by the point of the catheter, and re-deposition may take place within a short time. Mr. L., who suffered repeated attacks of renal colic and in whom a small ureteral calculus was found about an inch from the bladder, repeatedly during six months under observation, was submitted to a cystoscopic examination. At the end of the

examination a series of radiograms were made both with and without the catheter in place along the entire course of the genito-urinary tract, and the calculus was found absent. A few weeks later the patient suffered a similar attack, and upon examination the calculus was again found at the same location.

Miscellaneous—

The following operations were performed by Dr. E. R. Hare:

CASE 1.—Patient, a young man, aged 30; married, had had indefinite discomfort in the epigastrium and the right quadrant for a number of months, and had been treated for the condition without relief. Sometimes, particularly at night when the bladder was full, pain would become quite severe and localized in the right quadrant, which would be relieved by urination. Upon fluoroscopic examination, the stomach was hypertonic in type and spastic at times. The duodenum was defective, giving at once an impression of a lesion around this area. The cecum was enormously enlarged, and dropped down into the pelvis. Tenderness over this area was quite definite; no appendix was visible. The cecum retained the barium for over forty-eight hours, giving the appearance of a full rectum. A barium enema was given, and the condition was found the same. At operation a mobile, enlarged cecum and a long retrocecal subacute appendix, with much adhering membrane around the cecum, were found. The duodenum and gall-bladder were all free from pathology.

CASE 2.—Mr. H., aged 74, had always been active and well. The bowels had been constipated more or less for many years. He had recently suffered two attacks of intestinal obstipation, lasting about a week or ten days, with the usual symptoms of obstruction, including vomiting at each time. Passage with relief was obtained both times after many and varied attempts to evacuate the bowels. After the second attack the patient came here for examination, and possible operation for hernia, which he had had for many years. At this time he began to experience the difficulty of intestinal movement for the third time. He was allowed to remain for six days without any result from every attempt to open the obstruction. He felt excellently, except for occasional discomfort and pain in the abdomen. At one time he vomited up some brown material. Upon examination there was a hard, palpable mass about the size of a fist in the left lumbar region near the surface. A barium injection per rectum showed distinctive obstruction at the region with definite defecation filling. The operation performed by Dr. E. R. Hare revealed a hard growth in the wall of the descending colon about six inches from the splenic flexure, which was resected, and an end-to-end anastomosis was made. The patient had eight bowel movements during the first twenty-four hours after the operation, and made an uneventful recovery, getting out of the hospital eighteen days after operation. The gross specimen showed ingrowth of the tumor occluding the lumen entirely. Microscopically, it was adenocarcinoma.

Several other cases were demonstrated, but are here omitted.

Clinical Laboratory—

Demonstrations of specimens and routine laboratory methods, including Wassermann reaction, auto-genous vaccine, renal-efficiency test, gastric analysis, blood and tissue examinations, etc., were conducted.

DR. A. H. LAURENT

Dr. Laurent removed a needle from the hand by the direct x-ray screen method. Failure to remove this foreign body followed three attempts made by other physicians under the old method.

ST. MARY'S HOSPITAL

DR. F. H. K. SCHAAF

Demonstration of blood-grouping using Brehm's method.

Indications for blood-transfusion.

Different methods of transfusion.

Demonstration of the citrate method in a case of pernicious anemia, not as curative, but as a palliative measure, showing the possibility of prolonging life with transfusions, this being the patient's fortieth transfusion in eighteen months. He has been repeatedly as low as 15 per cent hemoglobin and 900,000 red cells, and is able to tell when he gets to this stage by frequent attacks of angina. Five hundred c.c. of citrated blood were transfused.

SWEDISH HOSPITAL

DR. THEO. TENNYSON

CASE 1.—Female, aged 65. Gall-stone. Operation: draining gall-bladder and appendectomy.

CASE 2.—Female, aged 14. Appendicitis, chronic recurrent attack for several years. Operation: Appendectomy.

CASE 3.—Female, aged 32. Appendicitis, acute attack within the last two or three days. Operation: Appendectomy, also tonsillectomy.

CASE 4.—Female, aged 42. Retorflexed uterus, chronic appendicitis. Operation: Perineorrhaphy, curettage, repair of cervix, appendectomy, and shortening of round ligaments.

CASE 5.—Male, aged 50. Carcinoma of rectum. Operation: Resection of same.

CASE 6.—Male, aged 30. Varicocele.

CASE 7.—Female, aged 20. Tonsillectomy and adenectomy.

CASE 8.—Male, aged 8. Tonsillectomy, adenectomy, circumcision.

UNIVERSITY HOSPITAL AND DISPENSARY

DR. HOWARD S. CLARK

CASE 1.—Mrs. F., aged 57. Painful eye, an old inflammatory glaucoma with tension of 50. Elliot trephine operation.

CASE 2.—H. B., aged 16 months. Congenital cataract. Needling operation.

CASE 3.—Mrs. J. Patient from Nervous and Mental Service complains of obstruction to breathing. Bronchoscopy showed trachea and bronchi normal

DR. W. H. CONDIT

Mrs. K. A. Admitted July 7, 1917: Hospital No. 13,672. Age 30; married one and one-half years; no children; never pregnant; menses at 15; regular up to last few months; much pain, duration at least a week as long as patient can remember; weight five years ago, 136; now 120; gradual loss. Family history: One sister feeble-minded; usual children's diseases.

Present complaint: The patient has never menstruated normally. Periods never less than a week in duration. Flow, very profuse, until just recently. Always severe cramp-like and bearing-down pains during menstruation. At the age of twenty-one years periods increased in duration, and at that time she became "plugged up." Had a very foul odor, and discharged pieces of "rotten meat" from the vagina. Has been under medical care most of the time for the past nine years for above condition. The last five years, periods have become two weeks in length. Watery and mucoid discharge between periods; occasionally, purulent in character. Discharge is so profuse at times that patient is unable to keep pads dry. The last two years this condition has been becoming worse. The last two months has been bleeding constantly. Fever of unknown height, taking sponge-baths to alleviate temperature. In bed since July 5. July 14, blood-transfusions from her husband.

Operation July 23, 1917: vaginal myomectomy. Morcellation removal of large soft intra-uterine myoma, which was attached by large base involving two-thirds of the uterine cavity. No marked hemorrhage, but marked oozing from base, which was checked by several catgut sutures, and a clamp was left in place. Discharged August 23, 1917.

Operation April 10, 1918. Since her discharge from the hospital August 22, 1917, patient has been in comparatively good health, the hemoglobin having improved from 40 per cent on discharge from the hospital, August, 1917, to 63 per cent. She is still having a menorrhagia and metrorrhagia from a large soft myoma involving four-fifths of the upper uterine cavity. This tumor was removed in toto by abdominal myomectomy. The cervix uteri which, at the time of the previous operation, was dilated to five inches in diameter, will now admit one finger. Cervix, cervical canal, and lower uterine segment were left, together with both tubes and ovary, which were normal. The myomectomy was chosen over a hysterectomy with the hopes of preserving enough uterine tissue to insure the menstrual integrity. Six days after the operation, the patient is normal and is sitting up in bed.

At the clinic a temperature-chart, pulse-chart and a blood-chart were demonstrated, together with a schematic drawing of the condition of the cervix uteri with the tumor at the time of the first operation. Museum specimens were presented illustrating all the different varieties of myomata occurring in the uterus.

Mrs. H. H., aged 30, Hospital No. 13,682. Patient admitted to hospital April 9, complaining of bearing-down pains; feeling of weight in pelvis, and marked menorrhagia.

Family history, negative.

Previous illnesses: Abscess opened through vaginal incision and drained five years ago. Seven years ago jaundice, followed by colicky pains in the gall-bladder region, radiating posteriorly and to the epigastrium.

Present trouble: Dates back to March, 1907, when the patient was struck on the abdomen. Was seized with cramp-like pains in the abdomen, and bleeding from vagina. Two days later a three-months fetus was taken from uterus. No pregnancies since, and more or less leucorrhœal discharge.

Operation: Midline incision in a very thick wall; fatty abdomen. Patient bled freely from every tiny vessel, and after operation tells us that she bleeds very freely. On reaching the sub-peritoneal fat, two very large arteries and one vein were encountered that spurted as the uterine artery would. We had great difficulty in tying these vessels and their branches before securing a good operating opening. The uterus was small, retroverted, and flexed, bound to the cul-de-sac by dense old adhesions. The left ovary was cystic, tube hydrosalpinx; both removed. The right ovary was small and buried in dense adhesions, as also was the tube. Both were released; plastic work performed to save their function. Round ligament was shortened by the Long technic.

Diagnosis: Chronic gonorrhœal metritis, salpingitis, and oophoritis.

DR. F. H. K. SCHAAF

Metabolism Clinic—

The importance of studies in metabolism and blood-chemistry in the diagnosis and treatment of nephritis, arteriosclerosis, benign hypertension, and diabetes was emphasized. Special attention was called to the determination of the blood-sugar in the differential diagnosis of diabetes mellitus and renal diabetes. Several cases of the latter have come under our observation during the past few months.

Several cases of diabetes mellitus and one of renal diabetes were shown, and the various methods of treatment (especially Allen's and Joslin's method) discussed.

DR. F. W. SCHLUTZ

CASE 1.—Boy, aged 2; complained for past year of pain in abdomen with frequent attacks of vomiting; marked pallor and emaciation. Sacculated tumor of abdomen, palpable and visible; moderate ascitis. X-ray findings show lung infiltration; von Pirquet, positive. Diagnosis: Tuberculosis of the peritoneum, with lung involvement; discussion of treatment.

CASE 2.—Three different cases of Mongolian idiocy, illustrating every phase of this condition. Differential diagnostic features between this condition and cretinism fully discussed.

CASE 3.—Boy, aged 13, showing marked retardation of growth; intellect quite normal; typical features and symptoms of cretinism. The case shows marked idiosyncrasy to thyroid extract; prognosis and treatment fully discussed.

DR. J. P. SEDGWICK

Breast-Feeding Clinic—

Several breast-feeding infants were shown with their mothers. Every child born in the University Hospital since the Department of Pediatrics took charge of the new-born children has been nursed by its mother, showing the possibility of getting breast milk in practically all the cases when the proper technic is used. Infants are fed at four-hour

intervals from the beginning. If the baby does not do perfectly well, it is weighed before and after feeding, and if it is found that the baby is not getting enough food, a simple milk mixture is given after each feeding—not in place of a feeding, but to make up the caloric requirement. Breast-feeding is the most important and most misunderstood subject in pediatrics.

Case of Spasmophilia—

A. W., a female, aged 2.—Except for a period of five months the child had had one convulsion a week since the age of ten months. The examination showed the reflexes to be active, but no Chvostek was elicited. The electrical reactions that were taken were found to be definitely spasmophilic. Recommended one gram of calcium in a five per cent solution five times a day, also phosphorus in cod liver oil, 1 to 10,000, twice a day.

DR. A. C. STRACHAUER

Clinic of brain cases held in conjunction with Dr. A. S. Hamilton, who discussed the history, symptomatology, and localization of cerebral lesions.

Brain Tumor—

Mr. M., No. 13,728, aged 42. farmer.

Complaint: Headache, vomiting, failure of vision.

History of present complaint: In the fall of 1916 the patient was hit over the back of the head with a black-jack, receiving a contused wound of the scalp. He was unconscious for thirty minutes, and during the following six or seven days he was in a dazed condition; had difficulty with the memory, and was incapacitated for work. Six months ago, in the fall of 1917, he noticed weakness and loss of energy, and next noticed a dull headache coming on insidiously, but persistent. This has increased gradually until at present it is very marked. In February, 1918, he began vomiting one to four times a day, accompanied by little or no nausea. Vomiting comes on suddenly, and is of the projectile type. Double vision since vomiting began. Vision more blurred each day.

Physical examination: Nystagmus lateral in both eyes; corneal reflexes diminished, left greater than right. Abdominal reflexes, left greater than right. Right Achilles and knee-jerk slighter than left. Eye-grounds: edema of the right disk, and some swelling of the left disk, though physiological cup still present.

Operation: Subtemporal muscle-splitting; decompression on the right side. Dura opened; brain under great pressure. Craniotomy on opposite side for removal of tumor ten days later.

Brain Tumor—

Mr. P. M., No. 13,715, aged 32.

Complaint: Sharp pains in occipital region radiating to frontal region. blurring of vision; and some difficulty in starting urination.

Present illness: In December, 1916, patient had a very severe cold with nasal discharge with a sharp pain in the back of the neck radiating to the forehead and associated with loss of vision; also headaches with spells of vertigo, which has gradually increased, incapacitating the patient for work. Slight difficulty in walking since onset of his present illness.

Physical examination: Fine rapid nystagmus when looking to extreme left. Ptosis of the left eyelid.

Pupils slightly unequal, right greater than left. Adiodokinesis probably to left; double patellar clonus; gait, spastic and somewhat ataxic; ophthalmoscopic examination: edema and elevation of both disks.

Laboratory examination: Urine and blood, negative; Wassermann, negative.

Spinal fluid: Wassermann, negative; cell-count, 4; colloidal-gold, negative.

Operation, April 11, 1918. Subtemporal muscle-splitting, decompression on the right side; dura opened; brain under tremendous pressure; craniotomy for the removal of tumor ten days later.

Traumatic epilepsy—

Mr. N., No. 13,392, aged 37; farmer; Polish. Complaint: General weakness; convulsions.

Head: Mild headaches for some years back; some vertigo at times; no vomiting; tinnitus aurium slight for last two years.

History of present illness: Dates from a head-injury received about one year ago. Kicked in left parietal region by a horse; became unconscious immediately, remaining so four days. Piece of bone taken from site of injury. During unconsciousness and first few weeks following, face was drawn to the right for five-minute periods at irregular intervals. The right arm was completely paralyzed when regaining consciousness and feeling numb. First seven days afterwards unable to talk. Recovery of speech gradual. After four months he regained use of the right arm. Five months later he was able to work about the farm. Numerous dizzy spells and headaches since, especially post exercise and some pain at site of injury. Nine months after injury (three months ago) while at the breakfast table, he noticed a prickling sensation in the palm and fingers of the right hand. His fingers then began to jerk, and he felt pain. This rapidly involved the forearm, arm, and shoulder. About the time the shoulder was reached, he became unconscious, and frothed at the mouth, but did not bite the lips or tongue, and did not lose sphincter control. After about an hour he regained consciousness, feeling weak and sleepy. Similar attacks have followed about once a week since.

Physical examination: Small oval depression near the upper and anterior corner of the left parietal bone, where the bone had been removed. No tenseness or bulging over the area. Slight loss of power in the right forearm and hand, but no marked muscular atrophy. Abdominal reflexes, absent. Knee-jerks hyperactive, right greater than the left.

Laboratory reports: Urine, negative; blood, normal; Wassermann, negative; Nonne, negative.

Spinal fluid, cell-count, 1; colloidal gold, negative; Wassermann, negative.

Operation on April 9, 1918: Horseshoe flap made over the site of the depression. Marginal callus causing pressure, adherent dural scar, cortical scar and small cyst, the size of a walnut, removed. Dural defect was covered by fascial transplant from the thigh with the fat side down. This is the sixth case so treated by me with most satisfactory results.

Carcinoma of stomach on old ulcer base.—

Miss A. W., No. 13,518; entered March 15, 1918. Aged 29; single; Swedish.

Past history: Tonsillitis.

Present illness: In the fall of 1908, she had a feeling of distress in the epigastrium, coming on two or

three hours after eating. These attacks continued for several weeks, and were relieved by drinking hot water or eating. The following year she had another attack similar to the above, lasting six weeks, and has had like attacks each fall since up to four years ago. The last attack began six months ago, lasting to date. Pain was continuous for two or three hours after eating, being worse at 3 to 4 A. M. Since five weeks ago the pain has not been relieved by food, but soda gave some relief. No blood in occasional vomiting. No blood in stool. Loss of weight, 8½ lbs. in the past eight months.

Physical examination: Small, undernourished, anemic woman of 30 years of age. Rigid in midepigastria region, moving with respiration, not particularly tender to palpation.

Laboratory examination: Blood: Med. sec. Anemia; gastric free HCl, 0-4; Wassermann, negative; total acid, 12; blood, negative; stool, negative.

Fluoroscopic examination: Large niche in the middle of the lesser curvature with a filling defect on the greater curvature opposite.

Operation, April 9, 1918. Large irremovable carcinomatous mass found in the stomach. Pylorus not obstructed. Secondary grafts on parietal peritoneum. Wound closed.

Carcinoma of the hard and soft palate—

Mr. O. L., No. 13,660; aged 74; male; married. Entered the hospital April 2, 1918. Complaint: Sore mouth.

The mass, which had been present for some time before, was cauterized six or seven years ago. Since then the recurrent growths present on the alveolar process of the maxilla on the right side have been cauterized with an electric needle about once in two years.

Operation: April 9, 1918. The lesion, carcinomatous in nature, was cauterized with a hot iron. The lesion was present on the alveolar process of the maxilla and hard palate.

Harelip and cleft-palate—

Richard I., aged 2.

Harelip and cleft-palate.

Operation: Repair.

Tuberculous peritonitis—

Miss L. L., Chippewa maiden, aged 19.

Two months ago the patient was taken with sudden sharp pains over the entire abdomen. Abdomen began to enlarge. Patient has been running a septic temperature of 103-104° F. in the latter part of the afternoon. Abdomen at time of admission to the hospital gives the evidence of shifting fluid.

Physical examination: Vaginal examination shows pelvic organs fixed and immovable.

Diagnosis: Tuberculous peritonitis, probably secondary to tubal infection.

Operation: Laparotomy; evacuation of fluid and removal of both tubes. Fimbriated extremity of the tubes patent and discharging tubercular material into the peritoneal cavity.

DRS. S. E. SWEITZER and HENRY E.
MICHELSON

Clinic in dermatology at the University Dispensary.

Cases shown of acne (vulgaris and varioliformis); blastomycosis, papulonecrotic tuberculide; basal-celled

epithelioma, sporotrichosis, "eczema"; dermatitis, lichen chronicus simplex, varicose ulcer; seborrhea, psoriasis, lupus vulgaris; lupus erythematosus; dermatitis herpetiformis; and scabies, impetigo, etc.

Discussions on vaccine, phototherapy and Röntgen therapy; application of Unna's cast; administration of carbon-dioxide snow; food-idiosyncrasy and its relation to dermatoses.

DRS. S. E. SWEITZER, H. E. MICHELSON, and
JOHN SCHROEDER

Clinic in syphilology.

Numerous cases of primary, secondary, and tertiary lues were shown. Also cases of tabes and syphilis of the special organs (iritis, keratitis, and cardiovascular).

Modes of diagnosis:

Spirochete examinations (dark field, india ink, Wright's strain); Wassermann reaction; clinical differential diagnosis.

Therapy:

Intravenous administration of salvarsan and neosalvarsan; intramuscular injections of mercury salicylate; inunctions of calomel ointment.

Discussions on "abortive cure" of primary, Wassermann-negative cases; routine treatment of established Wassermann-plus cases; intraspinal medication in tabes and cerebrospinal syphilis; congenital lues and Social Service.

DR. MARGARET WARWICK

1. Bedside demonstration of blood-culture with the distribution of the blood on the various media used.

2. Demonstration of the Nonne and colloidal-gold reactions of the spinal fluid with a short talk on colloidal gold. Demonstration of the different curves by means of colored charts.

DR. FRANKLIN R. WRIGHT

Genito-urinary Surgical Clinic—

CASE 1.—Man, aged 63. Difficult urination and incomplete emptying of bladder; catheter preparation.

Operation: Suprapubic prostatectomy. Result: recovery.

CASE 2.—Man, aged 44. Traumatic stricture. Patient has had slow urination for past six months; was sent in with diagnosis of hypertrophied prostate; No. 12 bougie would pass.

Operation: Internal urethrotomy. Twenty-four hours after operation the patient developed temperature 108° F.; after two days, 104°; then normal.

Result: Uneventful recovery.

WASHINGTON SCHOOL

DR. ELEANOR J. HILL

Clinic—Medical Inspection in Public Schools—

CASE 1.—This child was brought to the doctor for physical examination in the school on February 11, 1918. During the examination he mentioned a spinal curvature, which was being treated by a chiropractor. Examination showed a beginning kyphosis, with a knuckle forming at the 9th dorsal vertebra. The 7th, 8th, and 9th vertebrae are prominent. Consultation with the mother resulted in a visit to the Minnesota Hospital for Crippled Children, and the

application of a proper brace. The von Pirquet was positive.

CASE 2.—This child, who stammers, was sent in from the country to the special class under the Board of Education. He was so handicapped by hypertrophied tonsils and adenoids that an operation was necessary before any corrective work could be undertaken. He has been in the special class for one year, and can now be allowed to return to his home, with improvement enough to establish a good habit, and knowledge enough to put it into practice.

CASE 3.—Congenital paralysis of upper extremities. Until the case was discovered in the school-room, under medical inspection, there had not been any effort made to prevent deformity. He is now gradually overcoming the contractures of the fingers by supervised exercises, and there is a marked improvement. A Binet test was attempted with no result reached.

CASE 4.—Convergent strabismus discovered at time of physical examination in September, 1917. Treatment was urged, and the parents consented to have the child taken to Wells Memorial Dispensary. Operation was advised before attempting to fit glasses. The mother has consented to an early operation.

CASE 5.—Specific iritis. The condition was noted at the time of examination in 1915, and treatment urged. This was not obtained until two years later.

A positive Wassermann was obtained in May, 1917, and treatment begun at the University Dispensary. It is interesting to note that a positive Wassermann was obtained in the sister, while this was negative in the mother. In December, 1917, a Wassermann was negative, but a marked swelling of the knee was shown.

CASE 6.—This child has a large cystic tumor on the right side of the neck. This condition has been diagnosed as tubercular, and operation is not advised. A positive von Pirquet was present, but marked improvement has taken place in the last three months.

CASE 7.—This case is presented to show the marked degree of pyorrhea in this school child. Six upper and six lower teeth are extensively involved. The condition was discovered in the regular routine examination of pupils.

WELLS MEMORIAL DISPENSARY

DR. C. A. BOREEN

1. Baby A. G., aged 6 months: Seborrheic eczema.
2. Baby K., aged 1 year: Seborrheic eczema.
3. Mr. F. E., aged 40: Pustular syphilis.
4. A. E., boy, aged 12: Impetigo contagiosa.
5. C. E., girl, aged 9: Herpes tonsurans, face.
6. Baby E., aged 4 months: Infantile eczema.
7. Mr. D., aged 25: Ulcus durum.
8. Mrs. A., aged 45: Lues.
9. Mr. G., aged 36: Lupus vulgaris.
10. Mr. H., aged 24: Psoriasis vulgaris.
- 11.—Miss F. H., aged 18: Pityriasis rosea.
12. Mrs. O., aged 30: Lues.

NOTE.—Some reports crowded out of this issue will appear in our next issue—THE EDITOR.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
 The Official Journal of the
 North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
 H. J. ROWE, M. D. - - - Casselton, N. D.
 H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

JUNE 1, 1918

MAJOR JUMP'S APPEAL

The Council of National Defense evidently knew what they were doing when they selected Major Jump to go about the country and explain the need of medical men in the army service. He spoke in Minneapolis to an audience of more than three hundred men in the Gold Room of the Radisson Hotel on Saturday evening, May 18, and he was so simple, convincing, and sure in his statements, because they were conservative and moderate, that a number of men from various parts of the state who were in attendance presented themselves for further information. Of course, it happens that rank still appeals to the young man, but Major Jump told the men that it ought not to make any difference, and whatever commission they received they ought to go into the service, a statement which is perfectly true, and no young man under fifty-five who is granted a commission as lieutenant (the lowest given) should refuse the commission, particularly if he is physically fit and able to do the work. The possibilities are that promotions will be much more rapid when men have been in service a few months, and consequently their rank will be advanced and their pay increased.

The Volunteer Corps is to be composed of men who are physically unable to do the hard labor demanded of the Medical Reserve Officers' Corps. This matter, however, will be threshed out more particularly, and registration will be made of all

doctors throughout all the states. Minnesota is ready and able to supply her quota, and, after hearing what Major Jump said in regard to the need of medical men, there should be no hesitancy on the part of those who should be in the service.

Under the present plan to increase the medical force in the Army, 8,000 men are needed in the corps this year, and, properly divided among the states, it ought not to be difficult to raise this number within a very few months. General practitioners, as well as surgeons,—and the latter are needed in greater numbers,—should not hesitate to respond, for their services are quite as necessary as in any of the departments. However, among the specialists there is ample room for men who are experts in various departments of medicine,—eye, ear, nose, and throat, and men for chest work, radiographers, genito-urinary men, and neurologists, as well as men who are skilled or who may be trained in orthopedics. Many men who are under fifty-five, which seems to be the age-limit for the Medical Reserve Corps, can qualify in the various specialties if needed. At all events, men up to this age can do a tremendous amount of work, for they are habituated to it and they know from experience what to do.

It must be remembered in volunteering or enlisting that inevitably some of the applicants will be rejected. Some men are not fitted to this kind of work at all, and, although the Government tries them in various camps or hospitals, they will be found disqualified for one reason or another.

Major Jump made the assertion that men who did not respond to the call and who attempted in any way to evade the situation arrayed themselves as against the Government, and that anyone who deliberately kept himself out of the service when he could go in, all things considered, would be properly classified and tagged so that the public would know who were evaders and who were disqualified on account of physical or home conditions. Evidently, Major Jump expected to find more men in uniform in Minnesota, and he said to the audience, "If you said you would come on when you were needed, come on. I have called your bluff."

There are three things which should be considered in going into the Medical Officers' Reserve Corps: First, the men will receive proper physical training; second, they will learn, under superior officers, the necessity of discipline and obedience. Major Jump laughingly said: "You

doctors who are accustomed to giving orders and ordering your patients around, will be ordered around yourselves, and it will be a good thing for you." Third, at the various camps there is virtually a postgraduate school of instruction, so that no man need feel that, if he goes into the Army, he will suffer any decline in his mental faculties or opportunities for observation.

It is planned, as has been said before, that medical men who remain at home because they are needed, because of their physical disqualifications, or their age, or their domestic conditions, will be provided with insignia which will show the people at home that they are still loyal medical men. This ought to clear up the atmosphere, and show the public that at heart the medical man is right, and therefore is willing, although he may be disqualified for the reasons given above.

Some time ago stories were circulated in the newspapers that medical men were being killed in large numbers on the battle-line, but, like all stories, these stories were grossly exaggerated. As a matter of fact, England was able to contribute twelve thousand medical men, and out of that number about two hundred and eighty were killed or died in service, about the same proportion as would die at home under normal conditions, so that the medical man is really in not much more danger on the battle-field than he is driving his automobile on a city or country road.

THE AMERICAN NEUROLOGICAL ASSOCIATION

The meeting of the Association took place at Atlantic City on May 9 and 10, and was very largely attended, that is, there were about seventy-two registered from various parts of the country, and the program was an interesting one, in that it dealt with the war neuroses, as well as with other specialties in medicine and war.

Dr. T. H. Weisenberg, of Philadelphia, president of the Association, stated, in his address, that America has established a precedent for the nations by forming a division of neurology in the medical corps of the National Army. He further stated that no other war made such demands upon the medical profession, and that, while all wars have produced a great many head, spine, and peripheral nerve injuries, with the ever-increasing mechanical methods of warfare and the more general use of artillery, the number of wounds to the nervous system is very greatly increased. This caused the Surgeon-General's of-

fice to create a special division dealing with eye, ear, nerve, and other injuries. This is the first time an army has ever created a special neurological department, and, while there may have been some skepticism in the beginning, the work of the neurologist and psychiatrist has been of such exceptional merit that universal recognition has been given it by other branches of the service. He further stated that aviation is almost altogether a neurological problem; and he was supported in this statement by Lieutenant-Colonel Georges Dryer, R.A.M.C., consultant to the Royal Flying Corps of the British Expeditionary Forces. Colonel Dryer has been in this country for a few months, and has been of great service in the department of aviation. Among the various things that Colonel Dryer said was that they were picking aviators now by sizing up the men, whether they were able to pass aviation tests by eye and ear men or not. He said that the Barany chair has practically been discontinued in the armies of England and France. It seemed to be the general opinion of the Army officers who were present, and who took part in the discussion, that a man to be a good aviator must have a good cardiovascular system and a good nervous system, together with normal eye and ear conditions, that they had changed their viewpoint since they had gone into war and had learned many of its difficult problems, to the extent that sometimes a man who was unable to qualify in the special tests proved to be a good aviator and that others who had passed successfully with high marks were sometimes poor flyers, so it resulted in their taking into consideration the man and his physical capabilities.

Lieutenant-Colonel Colin Russel, R.A.M.C., was a consultant in neurological and psychiatric fields, and he gave some very interesting descriptions of his work among the nervous and mental cases, and said that they had learned from many trying experiences to withhold their diagnoses, and often in their reports they would put after the usual statements the letters "N. Y. D. N." (not yet diagnosed nervously). Colonel Russel, too, gave some very interesting accounts of the so-called cases of "shell-shock," and he impressed upon the Association the necessity of getting away from this term because it had a bad effect upon the British and French soldiers, for they assumed that, if they were once suffering from shell-shock, they were to be disabled for months and perhaps permanently, whereas it had been proven that many of these cases, a ma-

jority of them, were simply cases of hysteria, and were amenable to suggestion and reason. He told of two or three cases in which soldiers had received minor wounds of an arm or a leg who had been suffering from paralysis and who believed that their paralyses were permanent; and in his description of these cases he showed that in a number of instances he had been able to explain to the soldier the anatomical relations between his muscles, his spinal cord, and his brain, but, above all, the mental conditions behind it. In one case of an apparent paralysis of the right arm, where the arm had hung limply for eight months, by his methods of analysis and suggestion and arousing the will power of the individual, he succeeded in curing the man in one or two hours.

Major Foster Kennedy, of New York, who is attached to the British Forces, presented a paper through Dr. Dana on the nature of nervousness among soldiers, a very interesting study of conditions, and he coincided very closely with Colonel Russel's views. In the selection of this title Major Kennedy kept away from the term "shell-shock." He analyzed conditions much as other neurologists have done, and showed that the neurologic and psychiatric disabilities of soldiers are not infrequently of short duration.

Major Stewart Paton, M.R.C., of Princeton, N. J., had for the title of his paper "Psychiatry and Aviation," and he demonstrated the necessity of a clear head, quick wit, and a logical mind as a very necessary adjunct to aviation.

In all medical societies one hears more or less of the relationship of the doctor to the present war, not only in his own special branch, but in every department of medicine, and is shown the crying need of enlistment of more medical men to aid in all departments.

MEDICAL AND SURGICAL CLINICS, AGAIN

If we have spoken in these columns somewhat disapprovingly, even harshly so, of the attention given to the surgical clinics, particularly the spectacular ones, in our Clinic Week, we did not speak in a spirit of disapproval of such clinics, but of the useless attention given to them by men who could gain no profit by such attendance, while they lost much because they did not devote their time to such medical clinics as would give them vital knowledge needed in their daily work.

In order further to emphasize our point of view we give herewith the report of Dr. Frank

H. Hacking, which clearly shows what was offered general practitioners at the tubercular clinics. This report was written to appear as a regular report of Clinic Week, or, rather, as an excuse for not writing a detailed account of the work done in Dr. Hacking's clinics. Can it fail to emphasize the great value of Clinic Week if the opportunities offered are properly used by medical men visiting a clinical center where a large amount of both common and uncommon material can readily be collected, and is exhibited by experts who can impart, even in a brief clinic, information of untold value?

Dr. Hacking wrote his report after a discussion of the subject in the Hennepin County Society. It is as follows:

Many of us have taken the advice of the late Dr. John B. Murphy on different occasions, but most of the attending men during Clinic Week neglected his advice in regard to the growing need of the clinical study of internal medicine, and its great value in present-day practice.

One physician said: "We are still like medical students: we like to see the spectacular." Is the spectacular to be seen only in the surgical clinic? Study the program of the medical clinics in our Clinic Week, and you will find many features of value in the daily work of the practitioner. I have been told that most of the medical clinics were not well attended.

One man who knows tuberculosis and how to present its valuable points, had twenty tubercular patients at one of his clinics, and not a visiting physician present. My own tubercular clinics were attended in about the same manner, but, by request, I spoke on tuberculosis at two surgical clinics to groups of thirty and twenty-one physicians, respectively. On Tuesday and Thursday at the City Hospital Dispensary, Dr. Nelson and I had ten and eleven patients, respectively, ranging from suspected early cases to two who have since died with complicating bronchopneumonia. Two of them had hyperthyroidism with suspected tubercular lesions. Two of them with active tubercular lesions had been accepted by the draft boards, one with a large healed cavity. One had an empyema, one a recurrence after an apparent recovery three years ago. Some of them were of the type that had been treated for months for bronchitis, weak lungs, nervousness, stomach trouble, etc. Any of these could have been examined by visiting men, with the advantage of present-day diagnostic procedures. At Thomas Tubercular Hospital I had twenty-three patients for examination, varying from early to late cases, with two quiescent cases.

On Wednesday and Friday I had one hundred tubercular patients for examination at Hopewell Hospital. These included practically all the types and form,—pulmonary, bone, gland, peritoneal, throat, kidney, etc.

The interne who had chosen several patients for examination said to a visiting nose and throat specialist after he had examined six cases of tubercular laryngitis and one of frontal-sinus infection, in the dark-room: "If the visiting physicians knew what a lot of interesting material we have here, there would surely have been more of them out."

Can most physicians make an early diagnosis of pulmonary tuberculosis?

At an entertainment last week I overheard two nurses from different sanitariums talking. One said: "We had a patient come in today that I believe will not last a week. It is too bad so many come in in the last stages." The other replied: "We have had several about like that come in lately, and some of them tell me that they have been treated for a lot of other diseases, and no diagnosis of tuberculosis made until they are about ready to die. I wish I could talk to the doctors some day about the early diagnosis of tuberculosis."

Without her knowledge or consent, I am passing her remarks along.

Pulmonary tuberculosis, one of the most common diseases of mankind, will be hard to diagnose in the early stages until we accept a standard of early symptoms, such as have been so clearly outlined in the last edition of *Medical Clinics of America* by Dr. J. B. Hawes.

NEWS ITEMS

Dr. G. M. Palmer, of Bemidji, has tendered his services for Red Cross work in France.

Dr. Blanche Beatty, who formerly practiced in Virginia, has resumed practice in Pacific, Mo.

Dr. L. E. Claydon, of Red Wing, has been doing postgraduate work in Chicago and the East.

St. John's Hospital Training-School, of Helena, Mont., graduated a class of six nurses last month.

Drs. Mork, Watson and Turner, of Worthington, opened their new hospital building last month.

The Southern Minnesota Medical Association will hold its midsummer meeting in Winona on June 24 and 25.

The new hospital built at Sioux Falls, S. D., by Dr. A. J. Moe, formerly of Heron Lake, was opened last month.

The Mounds Park Sanitarium of St. Paul graduated a class of twelve nurses from its training-school last month.

Dr. J. L. Stewart, of Spearfish, S. D., has moved to Scotland, S. D., and become associated with Dr. H. J. Kools, of that city.

Under the new call for doctors for army work, Minnesota will furnish 70; Montana, 20; North Dakota, 50, and South Dakota, 45.

A base hospital of over two hundred beds has been organized at the Aviation School in the Overland Building in Midway, St. Paul.

Immanuel Hospital of Mankato has contracted with the City Council to care for the City's dependent sick patients at the rate of \$28 a week.

Dr. E. W. Buckley, of St. Paul, the Supreme

Physician of the Knights of Columbus, is going to France to study the war needs of that organization.

The Minnesota State Board of Health urges that all city boys who go to the country to do farm work this summer be vaccinated against typhoid and paratyphoid fever.

Dr. Robert H. Devine, of Wahpeton, N. D., died last month at the age of 55. He was a graduate of Jefferson Medical College, and was a pioneer in North Dakota.

The Park Rapids Hospital has been closed because of light patronage and the high cost of its maintenance. The hospital, moreover, did too much charitable work.

Dr. William N. Porteous, of Minneapolis, died on May 15 at the age of 63. Dr. Porteous was a graduate of McGill, and had practiced in Minneapolis nearly twenty-five years.

Drs. Johnson and Beyer have withdrawn from the Red Wing City Hospital and will open a hospital for their personal use. A residence building has been purchased for this purpose.

The new Ashland (Wis.) General Hospital was dedicated last month. Dr. J. M. Dodd, who has taken a very large part in the building of this hospital, presided at the dedication.

The secretary of the Montana State Board of Health issued a license last month for the sale of horse meat. The call for the license came from a butcher dealing with the Indians of that state.

Dr. J. L. Atkinson has resigned his position as Government physician to the Ft. Peck Reservation in Montana after thirty-one years of service at that port. He will take up private practice.

The Minnesota Supreme Court has decided that Chiropractors and others not licensed to practice medicine are prohibited from recommending surgical operations, which means the practice of medicine.

Major Frank C. Todd, Minneapolis, who has been the head of the 2,000-bed hospital at Camp Dodge, Iowa, for some months, has been made lieutenant-colonel, continuing as the commanding officer of the hospital.

Lieut. M. E. Withrow, of International Falls, received marked attention from the people of that city upon his recent visit before leaving for France. Dr. Withrow was the pioneer physician of International Falls.

Miss Elizabeth McGregor, superintendent of the Minnesota State Hospital for Crippled Children at Phalen Park, St. Paul, and Miss Marie Hoppe, an associate nurse, have gone to France to work in children's hospitals.

Dr. F. E. Murphy as city physician of Aitken placed a smallpox sign where it was not wanted. An assault upon the doctor followed, and he now has a verdict of \$11,000 against the two citizens who "took the law into their own hands."

The Alpha Omega Alpha (medical scholarship society) held its annual meeting on May 24, in the Amphitheatre of the Anatomy Building. Dr. Charles Lyman Greene, of St. Paul, gave an address on "The Heart of the Soldier."

Dr. J. P. Sedgwick, of Minneapolis, specialist in pediatrics, has given up office practice, and will confine his practice to consultations, including patients referred by physicians for diagnosis and treatment. He will see referred patients at the Abbott Hospital.

The State Medical Association of Montana has planned for summer training-schools for nurses to prepare graduates of the high schools of the state to do emergency nursing when such work is imperatively needed. Free lectures will be given by local physicians.

The campaign against venereal diseases to be waged by the Minnesota State Board of Health under the direction of Dr. H. G. Irvine, is to be a vigorous one, and the victims of these diseases who attempt to avoid the regulations of the board will be severely dealt with.

Dr. A. J. Chesley, chief of the Division of Communicable Diseases of the Minnesota State Board of Health has gone to France, at the request of the Red Cross, to do epidemiological work. Dr. O. McDaniel, of the Division, will probably be the acting chief during Dr. Chesley's absence.

At the annual meeting of the South Dakota State Medical Association, held in Mitchell last week, Dr. D. L. Scanlon, of Volga, was elected president; Major H. T. Kenney, of Pierre, first vice-president; and Dr. G. S. Adams, of Yankton, second vice-president. The next meeting will be held in Watertown.

An electrical expert of Minneapolis, who recently manufactured a portable baby-incubator for his own home, has placed it at the disposal of Twin City physicians. It is in possession of the Physicians' Exchange, at Midway, and can be had by any physician at a nominal rental or free, when necessary. It can be carried in any automobile.

There are now two teaching fellowships in pediatrics open at the University of Minnesota Graduate School. Each of these teaching fellowships furnishes a stipend of \$500 the first year, which is increased later. Men who are above

the draft age will be taken. It is a great opportunity for any one who wishes to make a specialty of pediatrics. Further information will be given to any one who will communicate with Dr. J. P. Sedgwick at the University.

The recent meetings held in the principal cities of the Northwest to encourage further enlistment of medical men for service abroad were largely attended and real enthusiasm was shown. Wherever Major H. D. Jump, of the British Medical Corps, appeared, a profound impression was left upon the medical profession, and no one entertained a doubt of the willingness of medical men to make the sacrifices called for. Note is made of the Minneapolis meeting in our editorial columns.

The first annual meeting and conference of the Minnesota Hospital Association will be held in Minneapolis on June 27 and 28. The headquarters and meeting place will be at the new Curtis Court Hotel, Fourth Avenue South and Tenth street. The program, which is in the course of preparation, will have papers on the planning and construction of the modern small hospital or sanatorium; the organization and business methods of the small hospital; the means of financing; the economies in use of supplies; etc. It is expected, however, that nursing problems and the question of how the smaller hospitals may be utilized in accelerating the production of trained nurses, will be the principal topics of discussion, and it is planned to devote an entire day, if necessary, to the same. Hospital superintendents, training-school principals, hospital trustees, and staff physicians are eligible to membership in the Association. They will find it profitable to attend the coming conference and to become members of the Association, if they have not already joined. The present officers are President, G. W. Olson, superintendent of The Swedish Hospital, Minneapolis; first vice-president, Lieut. G. H. Murray, superintendent of More Hospital, Eveleth, now at Camp Dodge, Ia.; second vice-president, Rev. J. A. Krantz, D.D., superintendent of Bethesda Hospital, St. Paul; secretary-treasurer, Mrs. Geo. G. Eitel, Eitel Hospital, Minneapolis.

RECENT NEW ASSIGNMENTS OF NORTH-WESTERN MEDICAL OFFICERS

Minnesota—

To Fort Riley, Kas.: Lt. L. W. Pollock, Rochester; Lt. E. N. Devitt, St. Paul.

To Fort Oglethorpe, Ga.: Lt. H. L. Sargeant, Northfeld; Lt. O. S. Neseth, Skyberg; Lt. A. D. Shapero, St. Paul.

To New Haven, Conn.: Lt. Guy Brelsford, State Sanatorium.

To Rochester, Minn.: Lt. F. W. Kohler, Albany.

Montana—

To Fort Riley, Kas.: Lt. M. H. Gleason, Butte; Lt. G. H. Davis, Custer; Lt. E. E. Meister, Missoula; Lt. L. K. Gibson, Bozeman.

To Camp Lewis, Wash.: Major LeRoy Southmayd, Great Falls.

North Dakota—

To Fort Riley, Kas.: Lt. J. E. Crammond, Rugby; Lt. R. L. Ghering, Larimore.

To Camp Lewis, Wash.: Lt. W. S. Anderson, Grand Forks.

To Camp Gordon, Ga.: Capt. E. E. Wands, Lisbon.

South Dakota—

To Fort Riley, Kas.: Lt. L. J. Brookman, Vermilion. Lt. C. A. Williams, Dorland.

Transfers

Major W. A. Dennis, St. Paul, from New York City to Camp Dodge, Iowa.

Lieut. R. B. Girvin, Villard, Minn., from Walter Reed General Hospital to Camp Hancock, Ga.

Lieut. H. W. Hundling, Rochester, Minn., from Army Medical School to Camp Jackson, S. C.

Lieut. H. A. Burns, Hutchinson, Minn., from Fort Riley, Kas., to Camp Lewis, Wash.

Lieut. F. W. Whitmore, St. Paul, from Ann Arbor, Mich., to Camp Pike, Ark.

Lieut. R. A. Johnson, Minneapolis, from Mineola, N. Y., to Houston, Texas, in Aviation Corps.

Major Paul B. Cook, St. Paul, order to Camp Dodge, Iowa revoked, and now ordered to Bellevue Hospital, New York City.

Lieut. H. B. Wagner, Minneapolis, from Fort Oglethorpe, Ga., to Camp Dodge, Iowa.

Lieut. P. A. Ward, Minneapolis, from Army Medical School to Camp Upton, N. Y.

Capt. E. H. Marcum, Bemidji, Minn., from Fort Riley, Kas., to Jefferson Barracks, Mo.

Lieut. W. H. Halloran, St. Paul, from Fort Riley to Jefferson Barracks, Mo.

Lieut. J. B. Clair, Winsted, from Fort Riley, Kas., to New York City (Cornell Medical College).

Major C. H. Clark, Duluth, from Camp McArthur, Texas, to Rochester, Minn.

Lieut. M. F. Smith, St. Paul, from Army Medical School to Rockefeller Institute, New York City.

Capt. G. B. Owen, Polson, Mont., from Fort Riley, Kas., to Camp Grant, Ill.

Lieut. Harold Schwartz, Butte, Mont., from Camp Dodge, Iowa, to Jefferson Barracks, Mo.

Lieut. John Tobinski, Missoula, Mont., from Camp Doniphan, Okla., to Jefferson Barracks, Mo.

Lieut. W. B. Rogers, White Sulphur Springs, Mont., from Camp McArthur, Texas, to Camp Kelly, Texas.

Capt. O. M. Meland, Grand Forks, N. D., from Hoboken, N. Y., to Camp Jackson, S. C.

Lieut. C. C. Smith, Stanton, N. D., from Camp Taliaferro, La., to Cincinnati, Ohio (Mechanics Institute).

Capt. R. D. Campbell, Grand Forks, N. D., from Camp Grant, Ill., to Jefferson Barracks, Mo.

Lieut. W. L. Barbour, Decring, N. D., from Camp Sherman, Ohio, to Jefferson Barracks, Mo.

Capt. B. S. Nickerson, Mandan, N. D., from Camp

Beauregard, La., to New Orleans, La. (Charity Hospital).

Lieut. A. D. Engesather, Brocket, N. D.; Lieut. Ralph Deming, Mercer, N. D.; Lieut. J. R. Pence, Minot, N. D.; and Lieut. C. R. Tompkins, Oberson, N. D., from Fort Riley, Kas., to New York City (Cornell Medical College).

Lieut. J. H. Crawford, Castlewood, S. D., from Camp McArthur, Texas, to Camp Kelly, Texas.

Lieut. G. A. Stevens, Sioux Falls, S. D., from Fort Leavenworth, Kas., to Kansas City, Mo.

Honorably Discharged

Lieut. H. G. Koefod, Rudyard, Mont.

Lieut. H. M. Ware, Butte, Mont.

Lieut. Benjamin Frankson, Rugby, N. D.

Lieut. J. C. Walton, Isabel, S. D.

OFFICE FOR RENT AND EQUIPMENT FOR SALE

The suite of rooms in the Masonic Temple, Minneapolis, formerly occupied by the late Lieut. J. P. Rosendwald, are for rent; and the furniture and equipment, including an up-to-date x-ray outfit, entire or in part, will be sold very cheaply. Address W. M. Walker, manager the Masonic Temple. Tel. Main 703.

POSITION WANTED

As anesthetist by a graduate nurse (R. N.) with nine years' experience in a large hospital. Best of references. Address 136 care of this office.

POSITION WANTED

A graduate registered nurse desires a position in a Minneapolis or St. Paul physician's office as a nurse. Satisfactory references given. Address 137 care of this office.

POSITION WANTED

An experienced nurse wants a position as an assistant superintendent of a small hospital or as a surgical nurse. Good references given. Address 133, care of this office.

LOCUM TENENCY WANTED

Locum tenens work for from three to twelve months by Class A graduate. Twenty-nine years old. Married. Two years' hospital and general experience. Address 131, care of this office.

OFFICE FOR RENT

Three hundred square feet of office room in the Physicians' and Surgeons' Building, Minneapolis. Common reception-room with a surgeon and two dentists. Address 132, care of this office.

PRACTICE FOR SALE

A \$5,000 cash practice for sale in town of 650 in western Minnesota. No competition. Electric lights, water, good school, and well settled community. Will vacate June 1st. Army service. Address 135, care of this office.

ASSISTANT WANTED

An assistant is wanted by a physician with a large surgical and general practice in a town of 4,000 in the Park Region district of Minnesota; married man preferred. Good opportunity for special work in x-ray and general laboratory technic. Good salary. Address 130, care of this office.

For Circumcision

we offer a special catgut suture not only particularly suitable for the purpose, but one that is exceptionally convenient and safe.



Sizes 00 and 0, Three Tubes in a Box. Price, 25 cents per tube.
No samples.

OBTAINABLE FROM YOUR DEALER

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

"Sick Headache"

—and other headaches—

are usually relieved more or less promptly as you remove their cause. In the meantime—

K-Y ANALGESIC

locally "rubbed in," will usually afford comfort without blistering or soiling.

Gives Nature's Corrective Forces a Chance

*No fat or grease. Samples and literature on request.
Water-soluble. Collapsible tubes, druggists, 50c.*



Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Chafing, Sunburn, Prickly Heat

—and similar afflictions—
are promptly relieved by

K-Y Lubricating Jelly.

Applied liberally to irritated or inflamed areas, the pronounced cooling and soothing action of this effective local remedy is at once manifest.



Water-soluble; non-greasy; "smells nice".

Collapsible tubes at Druggists.

Samples and literature to physicians only.

K-Y Lubricating Jelly

"Stops the itch
without greasing the linen."

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Paraffin Treatment of Burns

is successfully applied
by the use of

REDINTOL

Made from carefully selected ingredients of the highest quality, and combined in proportions to insure the most satisfactory results, Redintol makes possible the ready application of the newest and most effective method of treating burns, even of the most severe degree.

Redintol is a plastic and elastic dressing which forms an occlusive, non-adhering covering to the injured area. It can be applied with practically no pain and affords immediate relief from burning and smarting.

Redintol promotes rapid healing, with minimum scarring and lessened contractions of the skin or tendons.

Redintol is supplied in individual packets, ready for immediate application.

Sample and Full Directions on Request.

Johnson & Johnson

New Brunswick, N. J.

U. S. A.

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones. After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

155-7 N. Michigan Blvd. - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and anaerobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.

5 S. Wabash Ave.

ST. LOUIS, MO.

4185 Olive St. — Corner Taylor

NEW YORK, N. Y.

18 E. 41st St.

PUBLISHER'S DEPARTMENT

OCONOMOWOC HEALTH RESORT

The modern health resort for neurasthenic and borderline mental cases accomplishes remarkable results only when directed by a man of wide experience and high professional attainments, for every case is a law unto itself and needs constant professional attention. Dr. Arthur W. Rogers has long been at the head of such a resort at Oconomowoc, the noted lake region of Wisconsin, near Milwaukee.

In a natural park of over forty acres is an attractive building, modern in every respect, in which not only the comforts, but the environment, the atmosphere, of home is found. The trained attendants know how to surround the nervous patient with quieting influences by giving, not too much, but the right kind of personal attention; and few patients fail to respond favorably to such influences. Dr. Rogers furnishes the patient all that scientific medicine can furnish, and under such influences the patient is indeed rare who is not restored, often very speedily, to well-nigh perfect health.

MATERNITY AND SURGICAL CORSETS

The Spencer Rejuveno corsets and belts are not only the best that have ever been offered the medical profession, but they are now obtainable in Minneapolis from a woman who is thoroughly capable of fitting them to meet with absolute accuracy the demands of the medical man who indicates what he wants. Mrs. E. T. Glaze is the Minneapolis representative of the manufacturers, and she has competent assistants (graduate corsetieres) who go to patients' homes when necessary. Mrs. Glaze's office is in the La Salle Building, and she will call upon any physician who desires to see these corsets and belts. Her telephone call is Nicollet 7455.

THE MINNEAPOLIS CLINICAL LABORATORY

The original work done by Dr. Henry L. Ulrich, who conducts the above-named laboratory, is familiar to all of our readers; and his co-operation with physicians in the diagnosis and treatment of their cases is frequently made known by the reports of cases in medical literature. He is not only often called in consultation, but he often receives patients for extended observation under clinical laboratory methods.

Dr. Ulrich's laboratory offers the physicians of the Northwest all the facilities now furnished by the high-grade private or public laboratory.

For any desired information address Dr. Henry L. Ulrich, 410 Syndicate Building, Minneapolis.

MELLIN'S FOOD COMPANY

The Mellin's Food Company has made a scientific study of the diet of infants for many years; and, instead of attempting to tell the medical profession what an infant's food should be, it has consistently attempted to find out from scientific medical men what such a food should be, and then to manufacture it for the profession. This spirit of co-operation with the profession has gained for the Company the good-will and the con-

fidence of medical men, and no physician hesitates to prescribe Mellin's Food for the infant deprived of mother's milk when properly indicated.

The Company now offers to physicians, free of charge, a book which gives whole-milk formulas for normal infants, showing how to make mixtures that give the proper and desired percentages of proteins, carbohydrates, and fats, together with the calories of such mixtures.

THE CLARX MILLING COMPANY

It was a happy thought on the part of this high-grade commercial company to put upon the market a 100 per cent pure whole wheat graham, whole rye flour, and a sweet germ corn meal, and to give it the guarantee, the best in the world, of an honorable business house.

These products have been received with unusual favor by the public and medical men, and their excellence is so marked as to be readily recognized in the table product.

Sample packages are sent free to physicians upon request. It is worth while to ask for a package. Address the Clarx Milling Company, 402 Flour Exchange, Minneapolis, Minn.

X-RAY APPARATUS AND ACCESSORIES

Messrs. Noyes Bros. & Cutler call special attention to their facilities for meeting the needs of medical men in the line of x-ray apparatus and accessories. Both the house in St. Paul and the Minneapolis salesrooms carry a large line of such apparatus and accessories; and the house's experts give the purchaser both scientific and conscientious advice as how best to meet his needs and at the lowest price.

Convenient time payments will be arranged for when desired by the purchaser; and few physicians need fear that such apparatus when purchased wisely will not take care of deferred payments.

Their announcement, which appears on another page, is worth reading.

MOOR (MUD) BATHS

The Grand View Health Resort of Waukesha, Wis., has made an excellent reputation by its care of tired-out business men who go there to take mud baths, mineral water, etc., and also of those who go there to rid themselves of the ailments listed as rheumatism, gout, lumbago, etc. The golf course and tennis courts play an important part in some of the good restorative work.

Dr. E. P. Allen is the medical director of the Resort, and will cheerfully give any detailed information wanted by physicians.

ATOPHAN

Atophan is a non-depressant and absolutely safe systemic analgesic and antiphlogistic that has proved its value, beyond all question, in gout and articular rheumatism, and the various neuralgic pains that arise from various causes. It is equally efficacious in such well-defined conditions as are produced by eczema and pruritus.

Being formerly "made in Germany," it was unobtainable for two years. It is now made in America, and made better than ever. It is distributed by Schering & Glatz, Inc., of 150 Maiden Lane, New York City, who will supply literature.

APOTHESINE: SUGGESTIONS FOR USE

This product is applicable in any procedure in which a local anesthetic is indicated. It is supplied in hypodermic-tablet form. The strength of solution (in water or physiologic salt solution), and the quantity to be injected, should be determined by circumstances. Solutions generally used range in strength from 0.5 to 3 per cent, the weaker solutions when the anesthetic is to be applied to rather extended areas. The strength of solution generally preferred in surgical operations is 1 per cent. In dental work the 2 per cent solution is usually employed. Solutions of Apthesine act more slowly than those of cocaine, hence more time should be allowed for them to produce the required degree of anesthesia.

Apthesine is widely used in such operations as removal of tonsils and hypertrophied inferior turbinates, excision of thyroid, removal of gall-stones, prostatectomy, excision of carcinoma, plastic operation on the mouth, circumcision, laparotomy, resection of the femur, suprapubic cystotomy, inguinal hernia, sacral-nerve blocking, breast-amputation, vaginal hysterectomy, gland excision, wound-stitching, gastrotomy, exploratory tracheotomy, enucleation of the eye, etc.

TRIAL TUBES OF CHLORAZENE

It is interesting to learn that the Abbott Laboratories of Chicago are sending to physicians, on request, convenient trial tubes of ten Chlorazene tablets. In view of the growing importance of the Dakin discoveries, we suggest to our readers that they avail themselves of this generous offer.

AFTER THE LONG SCHOOL YEAR

The tired school child, whether girl or boy, is extremely liable to become vitally depressed, worn out both physically and mentally, and more or less anemic, by the end of each school year. With the coming of warmer weather, this depreciated condition becomes accentuated, and it is the part of wisdom to take steps to build up the tone of the organism, enrich the vital fluid by creating new red cells and hemoglobin, and to employ every available means adapted to reconstruct the cells and tissues and restore the depleted vitality. Pepto-Mangan (Gude) does yeoman's service in such condition, by furnishing an agreeable, absorbable, and

assimilable organic combination of iron and manganese, the agents most needed for blood repair and general reconstruction. It is pleasant to take, and does not irritate the digestive organs or cause constipation.

KORA-KONIA

There was a time when the use of so-called antiseptic powders was so common as to constitute a routine measure in the treatment of wounds and inflammation or irritation of the cutaneous surface.

The importance of asepsis and the fact that a clean wound will heal without the aid of antiseptic applications, has modified, to a considerable degree, the methods employed by progressive physicians. Yet, while the antiseptic action of such dusting or dressing powders has been to some extent discounted, it has been realized that certain other properties are not only desirable, but in many cases are almost imperative.

The ideal dressing or dusting powder should be absorbent, mechanically lubricant, slightly astringent, soothing, and healing. It should be composed of carefully chosen ingredients, of requisite purity, proportioned and combined in accordance with the needs of the tissues with which it comes in contact.

All of this emphasizes the value of Kora-Konia, the ideal agent for use by physicians, surgeons, obstetricians, specialists, and nurses. Samples of Kora-Konia sent to any physician on request to the House of Mennen, Newark, N. J.

STILL ROCK SPA

The Still Rock Spa of Waukesha, Wisconsin, is an ethical institution for the exclusive treatment of cases of diabetes and Bright's disease, and its honorable history is evidence of the good work it has done.

When a 100-room hospital for the treatment of two such diseases as diabetes and Bright's, which rapidly progress unless arrested or cured by scientific treatment—when such a hospital can be maintained for years under the observation of the medical profession whose referred cases are treated there, then it is safe to assume that the institution is one possessing great merit. This is the history of Still Rock Spa, of Waukesha, Wis., and the physicians who have patients in need of such treatment as this Spa offers may feel safe in referring such patients to Dr. Hodgson, the medical director of the institution.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, JUNE 15, 1918

No. 12

PNEUMONIA: A SYNOPSIS OF FORTY-SEVEN RECENT CASES

By W. H. BODENSTAB, M. D.
BISMARCK, NORTH DAKOTA

Pneumonia has been more widespread during the last few months in this country than ever before, and has appeared in practically epidemic form in our army camps. The mortality has been exceedingly high, reaching 47 per cent in some camps. Every effort has been made to combat the disease, and the most effective has been the serum treatment. About 30 per cent of the cases of lobar pneumonia, or, in other words, those caused by Type I pneumococcus, have been benefited by the serum; in all other cases the serum treatment has been uncertain or of no avail.

From reports gathered one would come to the conclusion that death is not due to the pneumonia per se, but to some complication upon which the serum treatment would have little or no effect. The cases of bronchopneumonia, or, as McCallum calls them, interstitial pneumonia, caused by the streptococcus hemolyticus, nearly always follow measles, and are extremely fatal, particularly in the army camps. In this part of the country the results have been more encouraging, and, although there are a great many more cases than ever before, the mortality-rate has been no higher than in former years. The interesting feature, however, is the high percentage of empyemas, or lung abscesses, following the pneumonia attacks. In our clinic at Bismarck, we have had under observation, since January 1, 1918, 47 cases of pneumonia, 40 of which were of the lobar type and 7 of bronchopneumonia.

Of the 40 lobar pneumonias, pneumococci were found present in the sputum in 28, pneumococci and streptococci in 10, tubercle bacilli in 2, and colon bacilli in 1. All of the cases that showed streptococci developed either empyema or interlobar abscesses.

In this entire series we had four deaths, as follows:

1. A woman of 50, who was admitted in extremis, suffered with bronchopneumonia, and died after twenty-four hours.

2. Lobar pneumonia followed by empyema and consequent thoracotomy. This patient, a boy of 3, was doing well when on the third day after the operation he developed a high fever, and died. The direct cause of death has not been ascertained.

3. Lobar pneumonia of the left side followed by empyema and thoracotomy. Three days later the patient developed a streptococcic empyema on the right side.

4. A patient who was admitted with a retracted right chest, a collapsed lung, and a thickened pleura, the result of an old non-operated empyema. He had also an effusion in the left chest of tuberculous origin. The left pleura was frequently aspirated, and when the patient was about ready to be discharged, he developed a streptococcic sore throat, followed by a left-sided pneumonia.

With reference to the location of the consoli-

dation as an etiological factor in producing empyema, I have not been able to draw any definite conclusions. Following is a table of the lobes of the lungs involved. These factors were established as well as possible by physical and x-ray examinations. (A certain percentage of the patients were admitted to the hospital after the formation of pus, and in these I had to take the home doctor's word for it.)

Right upper lobe.....	9
Right lower lobe.....	13
Right median lobe.....	4
Right upper and median.....	1
Right lower and median.....	2
Right lower, median, and upper.....	1

This case ran a very irregular course, one lobe becoming affected after another, and finally developed a streptococcic empyema.

Left upper lobe.....	2
Left lower lobe.....	6
Right lower and median and left lower lobe.....	1

This patient was admitted with consolidation of the right lower and median lobes. He had the

crisis on the eleventh day, but the chest did not clear up. After a few days pus was demonstrated in the right pleural cavity. Thoracotomy was done. He then developed a consolidation in the left lower lobe, which was soon followed by an exudate that contained a pure culture of streptococcus. The patient's left chest was aspirated every two days, and he is now without fever, and is improving rapidly, although still under treatment.

Of the 47 admissions, 27 were males and 20 females. The age ranged from one year to fifty years. The crisis occurred in 12 patients in from five to eleven days, and only one of these developed empyema.

The treatment of pneumonia is purely symptomatic and expectant. The patients are put out on the porch, water is forced into them, and a liquid high-calory diet given every two hours. Ice-bags to the head and the affected side are essential for the relief of pain. Considering the favorable results achieved under this treatment, I have refrained from using serum.

ACUTE ABDOMEN*

BY H. B. SWEETSER, M. D.

MINNEAPOLIS

I wish first to express my appreciation of the honor you have accorded me in asking me to read a paper before your Society.

The subject of this paper was suggested by several very interesting and instructive cases with acute conditions in the abdomen which have come to me recently; and I went through the histories of my cases for the past few years and picked out those which were unusual from the standpoint of diagnosis, or treatment, or course, and have based my remarks on a study of them.

By "acute abdomen" is meant any condition which arises suddenly with symptoms referable to some organ within the abdomen, and which demands prompt diagnosis and prompt decision as to the best plan of treatment for a successful issue. I feel that its discussion will be of interest to you and, I hope, of some profit, for the reason that abdominal emergencies are not at all uncommon, and, I am sure, you have all had about the same experiences, and have failed or succeeded

about as I have. In the practice of every physician these emergencies arise suddenly and when least expected. They often begin in the most innocent manner, and not infrequently remain apparently of no special seriousness until the patient is beyond hope of recovery. The problem involved is complex, a decision as to the plan of treatment must be made early, and upon this decision depends in large measure the fate of the patient. It is easy enough, after the individual case has ended in invalidism or death, to see wherein we may have failed to grasp and interpret the symptoms aright, but in the beginning it may not be at all easy, and, no matter how extensive our experience is, we are liable to be caught off our guard and fail to appreciate the impending disaster till too late. A very recent case exemplifies these difficulties very vividly.

A man, aged 38, and of good habits, visited a physician at his office on Friday afternoon, and gave the following history: The night before he had had luncheon in a downtown restaurant, and drank one or two glasses of beer. That

*Read before the Clay-Becker Medical Society, April 18, 1918.

night he felt sick, had a bowel movement, and a little distress in the abdomen; but did not vomit. In the morning he felt better, and went to his business. The physician, who is very competent and very careful, examined him thoroughly, with appendicitis in his mind. The temperature was 100° F., but there was no tenderness or rigidity at all in the abdomen. The idea of appendicitis was dismissed, and a diagnosis of toxemia from the unusual meal and beer of the night before was made. The urine was normal. The doctor, however, was apparently not entirely satisfied, for he told the patient to be sure and let him know how he was the next day. Late the next afternoon the patient telephoned that he was much better, and was sure he would be all right, and that the doctor need not call. During the night he was taken suddenly with severe pain, and when the doctor examined him early on Sunday morning the abdomen was distended, the pulse-rate somewhat increased, and the patient restless. I saw him later in the forenoon, and advised that he be sent to the hospital, with the idea of an immediate operation in view. When I saw him later he was better, and a leucocyte count gave only 6,500 white-blood corpuscles, but the urine contained albumin and many granular casts. Operation was postponed till the next morning, and an internist was called in consultation. On Monday morning at operation a small appendiceal abscess was found which had caused obstruction of the bowel; and on Tuesday he died.

Our failures are mostly due either to mistakes, to delayed diagnosis, or to procrastination in operating. In an analysis of the cases which I have reviewed it is very evident that those in which a correct diagnosis was promptly made and efficient treatment applied gave consistently good results, while those in which the true pathology was overlooked for some period (often for only a very short period) and to which, therefore, improper treatment was given, often terminated in death, or, if death did not occur, always resulted in prolonged illness, financial loss, and some degree of permanent disability. In the cases operated on within twenty-four hours after the appearance of the initial symptoms there was no mortality; if delayed to the second day the mortality was 16 $\frac{2}{3}$ per cent; if delayed to the third day 57 per cent; and if beyond the third day 50 per cent.

The series consisted of—

	Cases	Death	Per cent Mortality
Ectopic gestation	5	0	0
Strangulated hernia	3	1	33.33
Strangulation by bands	3	2	66.66
Volvulus	1	0	0
Rupture of bladder	1	1	100
Rupture of intestine (struck by auto)	1	1	100
Traumatic separation of bowel	1	0	0
Duodenal ulcer, perforated	2	1	50
Ulcer of ileum, perforated	1	0	0
Gunshot wound of abdomen	2	1	50
Acute pancreatitis	1	1	100
Acute appendicitis	23	4	17.5
Acute hemorrhage from stomach	1	1	100
	45	13	30

When confronted with a case presenting symptoms referable to the abdomen, no matter how mild these may be, it is the part of wisdom and for the best interests of the patient always to suspect a grave lesion and to use every measure at our command in the endeavor to arrive at a true diagnosis at the earliest possible moment. Then, if we have proven to our own satisfaction that the preponderance of evidence shows the likelihood that a serious condition is present, and that it is amenable to successful surgical attack, we should not wait for absolutely positive evidence, but should urge operation at the earliest possible moment. Only by such plan of action shall we be able to reduce the number of cases which we must review with regret after their termination.

The most vital point for discussion is diagnosis; and closely behind is treatment.

DIAGNOSIS

Diagnosis must depend on the history and on the physical examination.

A careful weighing of the points brought out in the history will often lead directly to the proper diagnosis. This is beautifully illustrated by one of my cases of extra-uterine pregnancy. A young woman, aged 20, was seen by Dr. G. Deziel, of Minneapolis, suffering from pain during a regular and apparently normal menstruation. She complained of being tired, was very pale, and her pulse was 130. This was on March 12. Her history was, that her menstruation had always been regular; that her last preceding

period had started on February 11 (just 28 days before) and had lasted three days; that the first day of every period was painful, and usually she was obliged to leave work on that day; that this time she started to flow March 11; and that she left work in the afternoon because of pain, but that during the night she had slept well and was up in the morning intending to go to work, but had been seized by a sudden sharp pain and felt weak, and after an hour had vomited. Doctor Deziel saw her at 2 P. M., and being unable to account for her pallor and rapid and feeble pulse by the amount of menstrual flow, suspected concealed hemorrhage. He asked her if it were possible if she might be pregnant, and on her answer he made a positive diagnosis of ruptured tubal pregnancy and ordered her to the hospital for immediate operation. If she had answered "no" he might have been uncertain, but her answer was, "I do not think so."

When we come to the physical examination the symptoms and signs upon which we must depend for diagnosis are (1) pain, (2) tenderness and rigidity, (3) nausea and vomiting, (4) temperature and pulse-rate, and (5) leucocytosis.

If these symptoms were always present in a typical and classical manner there would be no difficulties and no errors, but, unfortunately, many cases present themselves in which the usual symptoms are either absent or are so indefinite as to leave us very much in doubt as to just what is going on within the abdomen, or whether, indeed, the condition present is an abdominal emergency at all. Acknowledging that this uncertainty does exist and that many times error, to some extent, is unavoidable, nevertheless, it is true that the great majority of mistakes are due, not at all to the obscurity of the signs and symptoms nor to our lack of knowledge of the correlation of symptoms and pathology, but, it is sad to admit, rather to a lack of care and thoroughness in our initial examination and to our almost universal habit of jumping at conclusions after a very superficial study of the symptoms. This lack of thoroughness is illustrated in several cases:

CASE 1.—Mrs. S. was taken suddenly ill on Tuesday morning with severe pain in the epigastrium and repeated vomiting, but no fever. Her physician, *without examination*, made a diagnosis of gastric indigestion. On the next day he again failed to make an examination because at that time her pain and vomiting had almost entirely disappeared. On Thursday she was not seen at all, but on Friday another doctor discovered a strangulated hernia which, on operation, was found to contain gangrenous bowel. A spreading septic perito-

nitis was far advanced, and death occurred on the fifth day.

CASE 2.—Mr. N. felt badly on the 16th of the month, but worked until the 18th. He was then seen by his lodge doctor, who failed to make a diagnosis, but ordered a cathartic. At operation, on the 20th, there was found a gangrenous perforated appendix with widespread septic peritonitis, and death followed.

CASE 3.—The following case I am accountable for. Mrs. C. was assigned to my service at the City Hospital. Some years before she had had an operation for some pelvic condition. On admission she presented some symptoms of obstruction, but, as her bowels moved several times, a diagnosis of a kink from adhesion was made and operation was delayed. On the fourth day I was unable to visit the hospital, and on that day she vomited foul-smelling material, and her abdomen became distended. At operation it was found that a coil of bowel had been caught under a band and that necrosis and perforation had occurred. Death followed later.

In this case the gravity of the condition should have been earlier appreciated, and operation promptly performed.

CASE 4.—Two days later there was admitted to the City Hospital a second patient with exactly similar symptoms, but in this case operation was done at once, the coil of bowel released, and recovery followed without incident.

SYMPTOMS

1. *Pain*.—The most constant and probably the most important symptom of serious trouble within the abdomen is pain. It was present in all of the cases analyzed, but varied widely in severity, being sometimes so slight as to throw one off his guard. In fact it not infrequently happens that, with a history of previous pain, there may be absolutely none and no tenderness at the time of examination. This, with a nearly normal pulse and temperature, may be very puzzling. One case illustrates this. The patient, a young man, was taken ill in the morning with severe pain which continued all day. On the way to the hospital, about midnight, the pain suddenly ceased, nor could any tenderness be elicited at that time on deep pressure. The temperature and pulse were, 99.5° and 85, respectively, and as it was 1 o'clock in the morning I was greatly tempted to postpone operating till daylight. The white-blood count was 20,000, and I was informed by his mother that a brother had lost his life from just such a delay of a few hours. Operation revealed a gangrenous appendix and about eight ounces of turbid fluid free in the peritoneal cavity.

It has come to be recognized that sudden cessation of pain means release of tension; and in the abdomen it may mean rupture of an abscess, perforation of an appendix, or death of a strangulated intestine, and not, as one might suspect,

a sign of improvement later on. Another source of error is where the pain is masked under the influence of a dose of morphine; and this may lead to a fatal delay, either because the patient considers himself better and defers operation or because the surgeon is deceived. It is a rule to be remembered that a necessity for a second dose of morphine is a positive indication for operation.

Error may occur in the opposite direction, as in the lightning pains of locomotor ataxia, of lead poisoning and of diaphragmatic pleurisy in children. Some years ago a patient was brought to me who was said by his physician to have had typical attacks of gall-stone colic. At operation no disease of the gall-bladder was found, and, later, he developed paralysis and died. His sister was shortly after taken with similar symptoms and died, and at autopsy actinomycosis was revealed.

On another occasion a child was brought to the hospital with a diagnosis of acute appendicitis, because of great pain over the right inguinal region, the doctor requesting an immediate operation. The child had just recovered from an attack of measles, and examination revealed severe pleurisy, mainly of the diaphragmatic pleura. No operation was done, and, later, the physical signs of pleurisy became marked.

2. Rigidity and local tenderness are, next to pain, of great value in determining the presence of peritoneal irritation early in a case of acute abdomen. If these are entirely absent, but in the presence of pain, it may be assumed with safety that the disease is not an abdominal emergency requiring operation at the moment. Very early the seat of tenderness and the area of rigidity will direct to the organ involved, but they quickly become diffused over a large area. It must not be forgotten, however, that just as pain may be absent at the time of examination, so also may tenderness and rigidity be absent and under the same circumstances,—that is, there may have been a sudden release of tension, or the patient may be under the influence of morphine, or the patient may be moribund.

Also we must differentiate the cases of apparent tenderness, which occur in the hysterical or nervous or in cases of diaphragmatic pleurisy, or lead colic. It is well to remember that slight pressure if suddenly released causes pain if there is subjacent peritoneal irritation.

3. The temperature and pulse-rate may be very misleading. We are liable to think that a high temperature and a rapid pulse are essential

sequels to serious conditions within the abdomen. It is, therefore, important to remember that in many of the gravest lesions early in their course the temperature and pulse-rate may remain almost normal, and that this is the time most favorable for successful interference. Among my cases there is one of volvulus, one of gangrenous appendix, and one of perforated ulcer of the ileum with pus and feces widely disseminated throughout the abdomen, in which the temperature was 99.5°, 98°, and 99.5°, and the pulse 85, 70, and 72, respectively. Later, when the peritoneum is profoundly involved, the pulse is sure to increase in frequency, but to decline in strength, while the mouth or axillary temperature may remain low or even be subnormal. If the temperature, however, is taken by rectum it will usually be found to be high—103°, or 104°, or 105°. This is a point to be borne in mind, and incidentally it may be mentioned that such a variation in the mouth and rectal temperatures is a very grave prognostic sign.

4. Nausea and vomiting are not as constant as pain, and may be entirely absent. Three weeks ago I operated on a young woman whose appendix was gangrenous and in whose abdomen was a pint of bloody pus, who had had absolutely no nausea or vomiting at any time during her illness.

5. A leucocytosis in many of these obscure cases is an important sign, and an indication for prompt operation, but is absent often enough in the gravest cases to be misleading. In the above case of perforation of ileac ulcer the white-blood count was only 9,500, and in another fatal case of appendiceal abscess with obstruction and septic peritonitis only 6,500. Of course there were other symptoms in these cases which indicated their severity.

TREATMENT

Turning to the treatment there are some points worthy of emphasis.

1. It cannot be too strongly urged that acute abdominal conditions are absolutely surgical cases from the beginning, and that every hour of delay lessens the chances of recovery. Every effort should be made to arrive at the earliest possible diagnosis; and when made there should be no delay in operation. When you consider the pathology, it is seen how inadequate is medicinal treatment. Delay almost invariably spells disaster. Operation in the first few hours is simple and safe; later, it is likely to be a forlorn chance. Strangulation, volvulus, perforated

ulcer, and active hemorrhage are all absolutely fatal without operation, while in many of the other conditions we are taking a long chance by procrastination. Of the thirteen deaths in the series of cases which I have analyzed nine could most probably have been prevented by timely operation.

2. The giving of cathartics has no place in the treatment of these cases. Here also, if you review for a moment the pathology in most of them and visualize the effort nature is making to wall off the focus of infection and prevent the development of a diffuse septic peritonitis, you will appreciate the unwisdom of their use. The peristalsis produced is liable to rupture an abscess already walled off, or to tear loose adhesions which nature is trying to throw around the lesion, or to disseminate an infection already free in the peritoneal cavity, or to rupture a strangulated or necrosed bowel. It is easy enough to understand why we are wedded to the use of cathartics. It is because we have learned by experience that when the bowels have moved freely and thoroughly with the passage of gas that then we may feel fairly sure that all is well within the abdomen. The idea is almost universally entertained by the people, and also extensively by doctors, sad to relate, that, if the bowels can only be made to move, the patient will be cured. Many times I have seen cases in consultation where a cathartic has been given in the presence of obstruction as a test before deciding that an operation is necessary. Scarcely a case comes to us in which there is not a history of cathartics having been given, either self-administered or prescribed by the physician; and often the history further shows that the patient was doing fairly well till the cathartic was given, and then only a sudden change for the worse occurred. Some years ago I was called to a neighboring town to see a young woman who was suffering an acute attack of appendicitis. Her condition had been good until 2 p. m., at which time she had been given a dose of salts, with the result that at 7 p. m. her walled-off abscess ruptured and her condition became alarming. A prompt operation saved her life, but she had a strenuous time for a while.

3. Morphine should not be employed until after the diagnosis has been definitely settled, and, if an operation is indicated, until the patient and his friends have been fully informed of the condition present and of the danger of delaying operation. As I said before, if a second dose of morphine is necessary to control pain, operation

is surely indicated. As pointed out by Ochsner, if peristalsis be inhibited by withholding everything by mouth the pain is controlled in cases of gall-stone colic and appendicitis, so that morphine is unnecessary.

Concerning the operation: There are some points worth considering, which, under certain conditions, will tend to reduce the mortality. At the best, cases of acute abdomen are serious and are often desperate; and the mortality will always be high in spite of anything we can do, but with good judgment and skill we will often have the satisfaction of saving patients who seem apparently doomed.

1. It is important that the pathology be repaired, if the patient's condition permit. A strangulation must be released, a perforation closed, an abscess drained. If this cannot be done, then the baneful influence of the lesion must be diverted from the organism as far as possible.

2. If distention of intestine is marked, only that which is absolutely necessary to be done should be attempted. When the abdomen is open and the pathology in plain view and apparently easily removable, the temptation is great to do a complete operation, but very often we regret such action when later we watch the patient die of shock or toxemia.

3. Prolonged operations in acute abdominal conditions are especially dangerous.

4. In the presence of sepsis general anesthesia is very dangerous, and should be replaced as far as possible by local or possibly by spinal anesthesia.

5. In mechanical obstruction enterostomy is sometimes a life-saving procedure. It can be done under local anesthesia with a minimum degree of shock. When this condition of ileus develops post-operative, an enterostomy may be done without removing the patient from bed. I have done this successfully in several cases.

6. In post-operative ileus of paralytic origin it is very important to re-establish peristalsis. I have found cathartics by mouth of little value; and they are liable to be dangerous. We no longer use them. An enema may succeed in mild cases, but usually fails. Here pituitrin has been of the greatest value, and will often succeed in a manner little short of marvelous. In ten or fifteen minutes after a hypodermic injection of 1 c.c. peristalsis occurs, and large amounts of flatus are expelled. Sometimes a single dose is sufficient, but, if necessary, it may be repeated every

two hours without danger. In septic peritonitis, however, it has not succeeded with us, although Gerster mentions a successful case; and, of course, in mechanical obstruction it would be fatal.

In conclusion I would summarize as follows:

1. When a case presents with symptoms referable to the abdomen we should always look upon it as an emergency until absolutely proven not to be one.

2. We should use every means at our command to arrive quickly at a correct diagnosis, for

every moment lost will diminish the chance of success if an emergency exists.

3. Acute abdomen is strictly a surgical condition.

4. Cathartics have no place in the treatment.

5. Morphine should be withheld until the diagnosis is settled, and a plan of treatment decided on.

6. Pityuitrin is of great value in paralytic ileus, but fatal in the mechanical type.

7. Enterostomy is a life-saving procedure in distention due to septic peritonitis or to mechanical obstruction.

THE WARFARE IN MINNESOTA AGAINST VENEREAL DISEASES

FROM THE DIVISION OF VENEREAL DISEASES OF THE MINNESOTA STATE BOARD OF HEALTH

H. G. IRVINE, M. D., DIRECTOR

The Division of Venereal Diseases of the Minnesota State Board of Health, was organized in February, with Dr. H. G. Irvine as director. Just at that time Dr. Irvine was obliged to return to California for two months to continue his work in that state. During his absence an office was opened in the Capitol building in St. Paul; steps were taken towards organizing the personnel for the Division; and Dr. Mabel S. Ulrich began the educational work, which is to be carried on under her direction.

The plan of the Division includes the medical control of infectious cases, an educational campaign, the organization of adequate social-service work, and co-operation with law-enforcement authorities in the suppression of prostitution and the control of incorrigible infected persons.

Dr. Ulrich, supervisor of social hygiene education, plans to use this opportunity, not only to educate the public to the importance of the venereal diseases as a war problem, but to create a better and healthier attitude towards the whole field of sex hygiene and education. A course has been organized under her direction at the University for the instruction of prospective social-hygiene workers. Several members of the University faculty have given lectures in this course.

Dr. Ulrich has also given lectures at the state normal schools, and before many Parents' and Teachers' Associations and other interested groups. It has been arranged that courses shall be given in the normal schools next year in order

that teachers may be somewhat prepared for the sex problems which they will later meet.

After considering a number of applications, Miss Charlotte G. Ashbrook, was selected as chief social worker of the division. Miss Ashbrook comes from the Social Service Department of the Pennsylvania Hospital, at Philadelphia. The exact line along which the social control of venereal diseases will develop has not yet been worked out, but it will involve both the follow-up of the carriers of infection reaching the courts, and of patients treated in hospitals and other institutions. On the preventive side, efforts looking to the protection of girls against influences leading to prostitution will also require attention.

It is not the intention of the State Board of Health to do case-work in social service, but to assist institutions and communities in organizing and conducting such work. An especially important task will be to secure adequate social-service facilities. This will be necessary if they are to meet the standards for approval set forth in the new regulations of the Board.

The direct medical control of the venereal diseases will include reporting of cases on the part of physicians; compulsory treatment of infectious cases, if necessary; the provision of laboratory diagnostic service; the distribution of free salvarsan for indigent cases by the Board of Health; and the quarantine of incorrigible cases.

The regulations which have been adopted are directly in line with suggestions having the ap-

proval of the Surgeon-Generals of the War Department, the Navy, and the Public Health Service. Forms are now being printed on which reports are to be made. Before these reports are required physicians will be informed by circular letter exactly what their duties are, and how they may secure the diagnostic service and free salvarsan which the Board will provide.

The regulations provide that cases of syphilis, gonorrhea, and chancroid shall be reported, not to the local health officer, but to the State Board of Health. These reports are to be made on cards provided for the purpose, on which spaces indicate the data required. The reports when made are confidential, and are not public records. It is the physician's privilege to make his report without giving the patient's name and address, providing he is willing to be responsible for his patient's conduct and the possibility of his infecting others. This means that the doctor who reports a case by number only will be in the same position as though he had not reported at all in case the patient ignores his instructions and infects some one else.

Physicians will be required to give patients having a venereal disease a pamphlet of instructions, and to see that patients remain under treatment while they are infectious. A patient who gives up treatment by some physician or institution while still infectious, is to be reported to the State Board of Health by name and address. The Board will then employ such means as it finds necessary to control him. Quarantine will be resorted to only when needed to control an infectious person who refuses to remain under proper treatment, or otherwise conducts himself in a manner dangerous to public health.

Persons quarantined on account of venereal disease will be subjected to the same general control regulations applying to other infectious diseases.

Every person treating a case of venereal disease in any manner is required to report such cases coming to him. This applies, therefore, to counter prescribing, and the person not a physician who reports treating a case of venereal disease puts himself in the position of practicing medicine without a license.

The Board of Health recognizes that prostitutes are the principal carriers of venereal diseases. It is, therefore, necessary to co-operate

very closely with law-enforcement officials. Dr. Irvine, the director of this Division, with the assistance of a representative of the War Department, has accordingly worked out the machinery for reaching these carriers.

A plan has been arranged in the Twin Cities which will bring the police, the courts, and city and county prosecutors into an active part in the campaign against venereal diseases.

The legal attack on the prostitute is almost the first step in fighting the infection. It will be undertaken particularly in the Twin Cities because they are near the training centers of a considerable number of army troops. The importance of this work is doubled in these cities because it will result in protecting both the troops already in training in the community, and the potential soldiers to be drawn later from the civil population. The War Department is already recognizing the importance of this and also of protecting our industrial army. Inasmuch as many thousands of men are now engaged in government work; and, inasmuch as venereal diseases are definitely known to be responsible for a great loss of time and reduction in efficiency, the War Department has now taken up this phase of the work directly, and there has been organized a division of social hygiene for men and for women. This division will take over a considerable amount of work from the Committee for Civilian Co-operation in combating venereal diseases of the Council of National Defense.

SUMMARY

Briefly, the methods to be employed or encouraged are as follows:

Education of the public as to the dangers of venereal diseases, and the problem of control.

Education of the patients as to treatment and prevention of other infections.

Education of physicians as to their duty in the plan of control.

Reporting of cases.

Provision of adequate and convenient dispensary service.

Social-service control of cases.

Diagnostic service in the State Laboratory.

Distribution of free salvarsan where needed.

Quarantine of incorrigible cases, and of carriers who are dangerous to public health.

Suppression of prostitution.

SANITARY SUGGESTIONS REGARDING THE LOCATION, CONSTRUCTION, AND MANAGEMENT OF PUBLIC BATHING-BEACHES

H. A. WHITTAKER

Director Division of Sanitation, Minnesota State Board of Health

The proper location of a public bathing-beach is very important from a sanitary point of view. A body of water should be selected which is comparatively free from pollution, especially that of human origin. The physical properties of the water, which include turbidity, color, and odor, should be satisfactory. These facts should be determined by field and analytical surveys of the body of water selected. The volume of water should be sufficient so that dilution or displacement of the water at the bathing-beach can be accomplished without producing gross pollution of the body of water on which it is situated. The bathing area should be located at a point receiving the greatest exposure to prevailing winds. The variations in the depth of water should be sufficient to provide wading, swimming, and diving facilities for children and adults. The lake bottom at the bathing area should be naturally or artificially surfaced with material of such size and weight that it will immediately resettle on being disturbed by bathers or by wave action, and will not be uncomfortable to the feet of the bathers. Points of attraction in the bathing area, such as diving-stands and piers, should be scattered, in order to prevent the massing of bathers at a single point.

In order to prevent unnecessary pollution of the bathing-beach, certain instructions should be given to bathers. They should be warned against swallowing water accidentally taken into their mouth during bathing and against the indecent and dangerous practice of excreting bodily discharges into the water. The practicability of requiring each bather to take a shower-bath before putting on a suit and entering the bath, should be given consideration. Persons infected with communicable diseases must be excluded from the bath. It is desirable to have the bathing-beach under analytical supervision. Bacteriological examinations of the water can be made to detect excessive pollution of the bathing area and the gross pollution of the body of water on which it is situated. Microscopic examinations should be made to detect microorganisms, such as algae, etc., which may be objectionable if allowed to develop in large numbers. Physical and

chemical examinations may be indicated in special cases, but are not usually important if the proper body of water has been selected. If excessive pollution is shown to exist in the water of the bathing area during certain periods of the day when large numbers of bathers congregate, this condition may be improved by (a) limiting the number of bathers per hour, (b) by increasing the size of the bathing area, or (c) by disinfection of the bathing area with calcium hypochlorite or liquid chlorine.

The bathing-pavilion should be designed and equipped for a maximum capacity based on the number of persons who, during a given period of time, can safely use the bathing area in the body of water selected. The arrangement of the building should be convenient, and its construction and equipment such that it can be easily cleaned. The exposure of dressing-rooms and locker-rooms to the open air and sunlight is very desirable. A water supply of good sanitary quality for drinking and cleansing purposes should be maintained, and a satisfactory sewerage system installed for the disposal of waste from the building. Drinking water should be accessible, both inside of the pavilion and near the bathing-beach, in order to lessen the incentive for bathers to swallow the water in which they are bathing. Adequate toilet facilities should be available which will be easily accessible from the bathing-beach in order to discourage the use of the bathing area for this purpose.

The laundry for bathing materials should be conducted under careful supervision, and this material should be thoroughly disinfected during the process of cleansing.

The establishment of large bathing-pavilions and bathing-beaches for the accommodation of great numbers of people is undesirable. Under such conditions it is difficult to prevent the massing of bathers during certain periods, even though the bathing area is comparatively large. A number of small bathing-pavilions scattered about on the bodies of water selected is much more desirable than a single large bathing-pavilion and bathing-beach when considered from a sanitary point of view.

REPORTS OF CLINICS GIVEN DURING MINNEAPOLIS CLINIC WEEK—APRIL 8-12, 1918 IN THREE PARTS—PART III

ABBOTT HOSPITAL

DR. J. P. SEDGWICK

CASE 1.—J. K. aged 8. History given to frequent coughing and so-called "wheezing" attacks, also repeated attacks of fever. "At times collapse."

Diagnosis: Asthma, with probably infectious basis. Hypertrophied tonsils and adenoids. Dental caries. Eczema. Rickets, old. Dropped heart.

The temperature was 102° on entrance, but dropped to normal the second day. The tonsils and adenoids were removed, and the teeth given proper attention, after which the appetite became much better, and there was prompt and complete disappearance of symptoms.

CASE 2.—Baby McG., aged 15 months. Case of intussusception. Baby is in perfect health; was seized with violent pain at 4 p. m.; attacks of spasmodic pain about every ten minutes, lasting from one to two minutes; was happy and contented between attacks; occasional vomiting; sausage-shaped tumor palpated in the abdomen; negative rectal findings.

The above represents the symptomatology found in a large number of cases. Emphasis is to be placed upon the subjective symptom of spasmodic pain.

CASE 3.—Baby M., aged 3 months. Breast feeding. Child was constipated and cried a great deal (fussy). Case shown with chart. On entrance the baby obtained in the twenty-four hours 200 c.c. of breast milk, which was complemented with 300 c.c. of buttermilk mixture, one-half strength. By regular nursings, and with expression of the breasts after nursing, in about fifteen days the baby left the hospital in good condition. He had gained in weight, and had obtained between 500 and 600 c.c. of breast milk in twenty-four hours.

ASBURY HOSPITAL

DR. H. G. FRANZEN

CASE 1.—Male, aged 19. Farmhand. Accidental rupture of the bladder two days before operating; the abdomen was distended with urine and pus; gangrenous opening in the sigmoid, also in the cecum; a vertical tear in the bladder, which leaked when the bladder was distended.

Bladder sutured; abdomen cleaned; intestine sutured; wound packed; free drainage.

CASE 2.—Female, aged 21, married; had one miscarriage three months before.

Operation: Curettage; removal of left tube; uterus placed in position by the modified Gilliam method.

CASE 3.—Female, aged 64, widow.

Prolapse of uterus; large cystocele; large rectocele.

Operation: Bladder separated and replaced, and fascia anchored to anterior side of uterus near the internal os; perineum repaired; uterus elevated by the Gilliam-Ferguson method.

CITY HOSPITAL

DR. M. SEHAM

Dr. Seham gave a clinic on fourteen cases of tuberculosis in children, demonstrating D'Espine's sign and physical signs of enlargement of bronchial glands. X-ray plates accompanied the demonstration of these cases.

The following cases were also demonstrated with special reference to differential diagnosis: (1) meningism, following otitis media; (2) Mellroy's disease, congenital edema of the lower extremities; (3) fracture of the skull in a baby seven months old with subdural hemorrhage trephined, with recovery.

In the clinic on epidemic meningitis, emphasis was placed upon the differential diagnosis, the early use of the lumbar puncture, and the technic of lumbar puncture; and the administration of serum was advised.

DR. FRANKLIN R. WRIGHT

Genito-urinary surgical clinic—

CASE 1.—A. J., aged 63. Painful and difficult urination. Passes some dark-red urine, which has been bloody at times for past six months; pain and tenderness over bladder region. Rectal palpation shows a normal prostate. A hard, firm, tender mass palpated in bladder region the size of a hen's egg.

Diagnosis: Tumor of bladder; verified by cystoscope.

Operation: Suprapubic opening; resection of anterior bladder wall; drainage.

Result: Recovery.

CASE 2.—M. B., aged 73. Retention of urine; false passage made by first attendant in effort to catheterize. Bladder drained by suprapubic aspiration for five days before operation, thus allowing the kidneys to become accustomed to functioning without back pressure.

Operation: Suprapubic prostatectomy and drainage.

Result: Recovery.

CASE 3.—B. A., aged 60. Painful and very frequent urination, which can be accomplished only lying down. Urine loaded with pus. Has been in bed since September 29, 1917. Stone can be felt with bougie.

Operation: Bladder-wall much thickened; calculus removed suprapubically.

Result: Recovery.

CASE 4.—W. B., aged 79. Difficult urination. Residual urine of 2,000 c.c. Patient catheterized for one week; became uremic; stopped catheterization; patient recovered from uremia; partial catheterization for six weeks.

Operation: Suprapubic prostatectomy.

Result: Recovery.

NORTHWESTERN HOSPITAL

DR. JOHN W. BELL

CASE.—S. L. H., aged 43; married; salesman; uses tobacco moderately and alcohol moderately; Wassermann, positive. Family history: Father in good health; mother in good health. Personal history: Measles; hernia, closed in 1909; injured February, 1911, thrown from cutter, striking right side, etc. Present illness began shortly after injury, with precordial pain and oppression; later, more especially the last year, severe pain, extending to left shoulder and arm, increased by exercise; slight cough, more marked in supine position; blood-pressure, 144 right arm, and 148 left arm.

The history discloses two important facts, the presence of lues and trauma.

Examination: Precordial discomfort, breathlessness, and cough are the three most important symptoms present.

Inspection shows a diffused, displaced apex-impulse, and epigastric pulsation. On careful inspection, distinct pulsation in second and third right interpaces is noted.

Palpation confirms inspection as to location and character of apex-beat, and discloses thrill and diastolic shock in second space, also presence of tracheal tug.

Percussion discloses an abnormal area of dullness above and to the right of the heart.

Auscultation reveals a double aortic murmur, a harsh systolic murmur transmitted to the vessels of the neck, and a diastolic, downward over the sternum and left ventricle.

Diagnosis: The symptoms and signs present in this case point clearly to a change in the lumen of the first part of the aorta. Fortunately, by means of the x-ray, in this case, we were able to absolutely eliminate the only possible source of error, namely thoracic tumor.

Prognosis: Not necessarily grave, provided the patient is willing to lead a quiet life.

Treatment: Suitable diet; freedom from physical strain and worry; potassium iodide and aconite continued as long as indicated.

DR. ARTHUR T. MANN

CASE 1.—Inguinal hernia.—This patient, a man aged about 35, first noticed his hernia about two months or so ago after a "cold," during which he had developed a hard, persistent cough. In this connection, a statement made by Dr. T. C. Witherspoon before the Western Surgical Association some years ago is of considerable interest. He said that in the dissecting-room he had been much interested in examining the inguinal canal to see how hernias are produced, and that, in those without hernias, he had always found a spot in the peritoneum which represented the closed funnel to the testicle, through which he was always able to push a probe easily down to the testicle. In his opinion the acquired hernias here were into this channel, and so were really congenital in their essential type.

This hernia was operated on by a modified Bassini operation, which I devised ten years ago, and which offers one of the strongest closures. The external oblique is split outwards, beginning at the internal ring,

about three-quarters of an inch to an inch above Poupart's ligament, making a flap of tough aponeurosis, which is already grown fast to Poupart's ligament. This is used later to strengthen the first line of stitches in the usual Bassini operation. But before the first row of stitches is placed, the finger is inserted into the internal ring and rooted outwards until the loose muscle bundles here give way and the finger comes up against the main mass of muscle fibers attached to Poupart's ligament. This makes a firm outer boundary for the new internal ring. The first row of stitches of the usual Bassini operation, including the Coley's stitch above the cord, is now taken after suturing the transversalis fascia (Connell), if it is at all tough, and after the cremaster is drawn up under the conjoined tendon and its muscles (Halsted), if the cremaster is firm enough to add to the strength of the repair. Then the flap of strong aponeurosis, three-quarters of an inch to an inch in width, is drawn upwards under the cord, and stretched across from the internal ring on top of the conjoined tendon and well onto the rectus sheath beyond the place of the external ring. This strengthens the three points of greatest recurrence: (1) the internal ring; (2) the external ring; and (3) the line of suture between, with a firm flap of aponeurosis, which is already grown fast to Poupart's ligament and which will have a scar attachment to the conjoined tendon and its muscles three-quarters of an inch to an inch wide. The canal for the cord is made by bringing down the upper flap of the external oblique over the cord and suturing it along the outside of Poupart's ligament.

CASE 2.—Varicocele.—This patient also had a rather large varicocele. The cause of varicocele is not definitely known. It usually occurs on the left side, where the veins are longer than on the right, and have no valves to lessen the blood-pressure, while those on the right have valves. The pressure of a truss will sometimes cause it. Other reasons are given. It is a varicose condition of the pampiniform plexus. The diagnosis is easily made, the only condition likely to be mistaken for it is an omental hernia, but the difference in the feel of it should make the diagnosis easy. The varicocele feels like a bag of worms.

It is common in young men, but is rarely met with later in life; therefore most of the cases have a spontaneous cure, and it is seldom necessary to operate on any of them except those of large size which threaten atrophy of the testicle, occasionally on the medium-sized ones in neurotic individuals, and on those in men going into military service.

The radical treatment is simple. Dissect out the cord well above the testicle; isolate the vas deferens, the artery, and the nerve going to the testicle, and one or two veins to take the return blood-flow; resect from an inch to an inch and a half of the remaining part of the cord; and ligate the stumps, draw them together, and suture them end to end with chromic gut so that they will act as a suspensory to the testicle. The result is thrombosis in the pampiniform plexus, followed by the same changes which occur in obliterating endarteritis. This obliterates the veins, and shrinks the mass greatly in size. It is unnecessary to do the more difficult dissection of the pampiniform plexus. The testicle is left well suspended and with its circulation and nerve supply good.

CASE 3.—Malignant cyst of the ovary.—This patient,

aged about 38, first noticed swelling in the abdomen and palpitation of the heart in the summer of 1916. She had a fall on the floor, and flowed one day. She continued to enlarge in the abdomen, and was losing strength. She swelled greatly by January, 1917, when some doctor tapped her abdomen and drew off a large quantity of ascitic fluid. This was repeated twice more at intervals of two months. She was then operated on June 3, 1917, at another hospital. A large quantity of abdominal fluid escaped, and there was found a proliferating cyst of the ovary with the abdominal surface studded with papillary growths, with one or two masses elsewhere, all secondary growths from the ovarian tumor. The ovarian tumor was removed; and she was told that she had cancer, and that they could not remove it all.

She came to me five months later for aspiration of a large quantity of fluid in a tight, distended abdomen, but refused any further operation. She had already been tapped before this since her operation. At this time I found pain and tenderness toward the end of the aspiration, in the upper left abdomen, and had to stop before the aspiration was completed. I saw her again four months later, two months after another aspiration by someone else.

At this time her abdomen was distended and tense, and she had developed a thin, translucent umbilical hernia about the size of a golf-ball. She consented to have this repaired, but would allow no further operating. I did this easily under local anesthesia by the upper and lower flap method, but, while this small incision was still open, I had the opportunity to observe the very interesting condition inside of the abdomen.

The small secondary papillomas which had studded the peritoneum nine months before had entirely disappeared. There was a small mass at the ovarian stump the size of a hazelnut studded with a papillary growth. There was also an irregular mass to the left just above the umbilicus in the omentum adherent to the bowels below and holding them close to the left of the aorta, but with no adhesions elsewhere in the abdomen and no other growths. The mass was remarkable. A papillary mass the size of an English walnut projected from its ventral surface, which I removed. The mass below was about three inches long, two inches wide, and an inch or so thick. It presented closely packed cysts, each about the size of a marble. I opened five, which was all I could feel, and from three of them obtained a straw-colored fluid, much like that of an ovarian cyst, and from the other two a similar fluid streaked with grayish material. Evidently, the secondary growth was attempting to reproduce ovarian cysts. This is the first time I have ever seen this happen. It must be quite unusual.

I advised this patient to have a complete operation performed, stating that we might possibly obtain a cure because all of the secondary growths on the peritoneum had already disappeared and because the growths which were present seemed of such a mild type of malignancy. She said she would think it over.

Remarks: Since the clinic, her abdomen filled up a little with ascites, but she began to gain weight, and during May her waist measure decreased one inch. It does not seem possible that she could get well without the removal of the abdominal secondary and the stump of the ovary; but as long as her weight and strength increase and her waist measure grows smaller, I do not

feel like urging an operation against her will very strenuously unless there are signs of increase in the size of the tumors. I should like to operate on her, but it is barely possible that she may now go on and lose the remaining secondaries without operation.

UNIVERSITY HOSPITAL

DR. JAMES A. JOHNSON

CASE 1. No. 13,629.—Girl, aged 7. Admitted March 29, 1918, complaining of pain in right lower quadrant of abdomen. Family and past history, negative. Present illness: Began December 25, 1917, with attack of general abdominal pain localizing in right lower quadrant, nausea, and vomiting. Patient was in bed one week. Examination: Physical, negative except local tenderness over appendix on deep pressure. Urine, negative; w. b. c., 8,100; Wassermann, negative. Operation: Large subacute appendix bound down with adhesions. Removed, closure without drainage. Post-operative: Uneventful recovery.

CASE 2. No. 13,736.—Female, aged 30. Family and past history, negative. Present illness: January, 1918, was operated on for left femoral hernia with uneventful recovery. One month after leaving hospital had severe cold and continuous coughing. At this time noticed lump over right femoral opening. Operation: Femoral hernial sac dissected free and opened, and omental hernia reduced. Femoral opening closed by suturing Poupart's ligament to pectineus muscle. Post-operative: Uneventful recovery.

CASE 3. No. 13,720.—Female, aged 50. Family history, negative. Past history: Operated on two years ago for ovarian tumor and appendicitis. Present illness: Complains of attacks of pain over gall-bladder region radiating to left side and back, accompanied by nausea and occasional vomiting, no chills, fever, or jaundice. Attacks have constantly become more severe and at shorter intervals. Examination: Physical, negative except marked tenderness over gall-bladder on palpation. Urine, negative; w. b. c., 8,500; Wassermann, negative. X-ray examination of stomach and bowel revealed nothing abnormal. Operation: Large dilated distended gall-bladder which could not be emptied by pressure. Adhesion from previous cholecystitis, obstructed cystic duct. Gall-bladder removed. Post-operative: Uneventful recovery.

DEMONSTRATION OF POST-OPERATIVE AND PRE-OPERATIVE CASES

Bone Clinic.

CASE 1. No. 12,363.—Girl, aged 6. History: September 28, 1918. Began with severe pain in right knee, which was so severe it kept her awake all night and lasted several days till she was admitted to hospital, October 3, 1918, with severely swollen knee; temperature, 102°; w. b. c., 32,000; polymorphonuclears, 85 per cent. X-ray was negative. October 5, 1918, joint aspirated; a purulent fluid containing pure culture of staphylococcus. October 11, 1918, after consultation of surgical staff, the lower end of femur was drilled into, but proved negative. October 30, 1918, x-ray showed clearly a worm-eaten appearance of entire epiphysis of the lower end of the femur, which was confined below epiphyseal line. The knee-joint was opened, and the surrounding tissue drained. She was discharged

April 26, 1918, with a stiff knee. This was a rare case of infection of bone confined to the epiphysis.

CASE 2. No. 13,228.—Girl, aged 17. History: Seven years ago had acute osteomyelitis of right femur, and since this a discharging sinus. January 20, 1918, again began with acute onset. She was admitted to the hospital February 18, 1918. Temperature, 104°; pulse, 130; w. b. c., 11,900; urine, large quantities of albumin, blood, pus, and casts. X-ray showed extensive destruction of bone and a large sequestrum. February 22, 1918, operated on under gas anesthesia; sequestrum removed, and two large abscesses in bone drained, as was also subcutaneous tissue. Temperature dropped, and urine was negative except occasional cast on February 27.

CASE 3.—Miss G., aged 14. History: March 1, 1918, she fell on the ice injuring the right hip, but was able to walk home. One day later began to have severe pains in hip which continued till she was admitted to hospital March 15, 1918. At this time the hip was flexed and very painful. Temperature, 102°; w. b. c., 18,600; urine, negative. X-ray of hip, pelvis, and spine, negative; Wassermann, negative. Operation March 19, and pint of pus lying in front of gluteal muscles drained. Fever dropped to normal, and she has made an uneventful recovery.

CASE 4.—Mr. N., aged 45, for operation. History: Fifteen years ago had osteomyelitis of right hand, which he says healed slowly, but gave him no trouble till one and one-half years ago, when he injured it by a "back kick" while cranking his automobile. It became severely swollen, and was opened. Now he has a large swollen hand with numerous sinuses discharging. X-ray shows extensive destruction of carpal bones due to tuberculosis. The hand will be amputated as soon as the secondary infection in his arm has disappeared.

CASES FOR OPERATION

Nerve Clinic.

CASE 5. No. 13,425.—Male, aged 26. History: One year ago had accidental gun-shot wound of right arm just above elbow with immediate complete paralysis of ulnar and median nerves.

CASE 6. No. 13,652.—Male, aged 30. History: Eight and one-half weeks ago cut left elbow with saw, severing the ulnar nerve. The wound is infected, but will be operated on as soon as this clears up.

CASE 7.—Mr. K. History: November, 1918, had comminuted fracture of left humerus with immediate paralysis of musculospiral nerve. Four and one-half months later regeneration began, and he has made rapid progress, which demonstrated that these cases should not be operated on early.

Miscellaneous Cases.

CASE 1.—Baby E. Supernumary thumb.

CASE 2.—Baby F. Patent omphalomesenteric duct with bowel contents escaping.

DR. A. C. STRACHAUER

(Reports continued from last issue)

The following cases were demonstrated:

CASE 1.—Carcinoma of the cecum with resection of the entire ascending colon and terminal ten inches of the ileum. Operation performed three years ago. Patient in perfect condition, as ascertained by an examination of the peritoneal cavity two weeks before at the

time of a gall-stone operation. The specimen was shown.

CASE 2.—The operator's own operation for pyothorax, the rib being trephined under local anesthesia, and a snug fitting, firm rubber tube just fitting the trephine opening inserted. To the end of the rubber tube is attached a collapsible rubber-dam tube, one foot in length, which is submerged in water. This apparatus permits of the discharge of pus, but on inspiration the soft portion of the tube collapses, and pneumothorax with the attending ill result of pulmonary collapse, is avoided.

CASE 3.—Albino with angioneurotic gangrene of the toes. Treatment, active hyperemia.

ST. BARNABAS HOSPITAL

DR. A. E. BENJAMIN

(Continued from last issue)

CASE 4.—Mr. S. V. M., aged 50, married. Had a boil on the back of his right hand the latter part of September, which seemed to heal up in good condition, but later the hand began to swell and became very painful. The patient entered the hospital October 1, 1917, in a dazed condition from septicemia and nephritis. The hand was much swollen and contained pus cavities. On October 11, under gas and ether anesthesia, the back of the right and anterior side of the wrist were incised in several places, putting in six rubber drains through the infected area for irrigation with Dakin's solution. The back of the left hand was also incised in four places, and considerable pus escaped. Two tubes were put through for drainage.

On October 16, 1917, under local anesthesia, the outer and anterior side of the left leg, extending from the upper to the lower third, was opened and a tube was inserted and about one-half pint of pus was evacuated.

On October 20, the right leg was opened up between the tibia and the fibula, and contained about one pint of pus. The right arm bled profusely because of the diseased blood-vessels at the base of the thumb. It was opened up down to the artery, and packed with gauze.

On December 20, 1917, under gas and ether anesthesia, several sinuses were widely opened, and numerous pockets were drained in the hand and wrist. Three deep ones were drained, a small tube and catheter were placed in these wounds for the use of Dakin's solution.

On March 11, 1918, under gas and ether anesthesia, some of the carpal bones that were diseased in the middle were removed, as well as the middle metatarsal head. The opening was enlarged and extended across the hand, all communicating even to the base of the fingers. These cavities were filled with Morhoffs bone-paste. The patient is now in good shape, all the limbs being free from pus except the first hand, which became infected. He has some disease of the carpal bones. By curetting out these cavities, draining, and using Bipp's we may gradually overcome the infection, and he will possibly have a useful hand in time, although it may be stiff in certain joints.

DR. A. G. WETHALL

1. Monday: Genito-urinary clinic.
2. Wednesday: Cystoscopic demonstration.
3. Friday: Genito-urinary clinic.

HOSPITAL DEPARTMENT

CONDUCTED BY G. W. OLSON

Superintendent of the Swedish Hospital, Minneapolis

THE COMMUNITY HOSPITAL A WAR-TIME NECESSITY

War conditions in rural communities of Minnesota are reflected in occasional articles in the country press. At Barnesville, where there is only one doctor left, he issues a public appeal for all obstetrical cases to come to the hospital, because there isn't time for him to attend to them all properly if he must drive out in the country. The notice "to the Public" is issued by Dr. H. J. Thornby.

"While I am here alone," he says, "to accommodate the people and give better service, we would like to encourage all obstetrical cases to come to the hospital, if possible, as I can handle half a dozen cases there as easily and in the same length of time as one case when I have to go into the country."

Dr. Thornby offers to make terms at the hospital which will give patients a lower cost than if they remain at home.

The above item, clipped from a recent issue of a Minneapolis daily, is interesting to the writer, principally because it supports his contention that the community hospital is an economic factor, as well as a hygienic one, in community life.

Dr. Thornby's appeal to the people of Barnesville and vicinity is timely and practical. If heeded, it will result in much good to the community. Let us enumerate some of the benefits that will accrue:

1. The doctor's time and energies will be conserved, so that he may endure the strain of caring for the medical needs of the community single-handed.

2. His patients will save money, as the doctor's fees will naturally be less when he doesn't have to drive miles into the country to call on them. They will also save time, through quicker recovery, resulting from more frequent attendance of the doctor and from better nursing.

3. The death-rate will be kept down, lives will be saved, mothers' sufferings will be lessened, and babies will have a better chance.

4. The business on the farm or in the shop will not be seriously interfered with because some member of the household is sick. Everybody will stay on the job and attend to business. The pigs will not go unfed nor the cows un milked because father has to go to town to get the doctor or some supplies from the drug-store. Nobody and nothing will suffer except the sick one, and his or her suffering will be greatly ameliorated by the care and treatment that only the hospital is equipped to administer.

Barnesville, a prosperous village of fifteen or sixteen hundred people, will find the hospital one of its great assets—just as important as its town-hall and fire-fighting equipment. It may not be willing to tax itself for the former as it does for the latter. Few villages in America are as yet awake to the need of disease-fighting equipment. But we predict that the next step in Barnesville will be the building of a modern, fireproof hospital of fifteen or twenty beds, by a corporation formed by its public-spirited citizens. In charge of this hospital they will place a well-qualified graduate nurse and provide her with the means and the authority to conduct it in a thoroughly professional and creditable manner; and Dr. Thornby or any other good physician who chooses to practice in Barnesville will have a first-class place to send his patients to, where they may be sure to receive first-class care.

The advantages of hospital care in even slight illnesses will gradually become apparent to townspeople and country folk, with the result that the hospital will be self-supporting. Another result likely to follow is that the "country doctor" will come into possession of some of the advantages his city colleague enjoys, namely, opportunity and facilities for laboratory diagnosis; modern means for surgical, medical, manual, mechanical, or dietetic treatment, scientifically planned and systematically carried out; a chance to see his patients daily without covering his person with road dirt and his desk with garage bills; and, last but not least, a chance to spend his nights at home with his family like any other good citizen and devote an evening now and then to reading the current literature of his profession.

The case of Barnesville is duplicated in thousands of communities in this country. The local hospital, properly organized, equipped, and conducted, is the solution of the problem of the over-worked physician and the medically undermanned village or countryside. The community hospital is not only a war-time necessity, but it is an all-time asset. The village or small city that aspires to substantial growth, that wishes to retain its good citizens, and keep others coming to it, will see that it offers not only good schools and churches, etc., but also a good modern hospital, small or large as the requirements may be, for

thus only can capable physicians be retained and the health of the community properly safeguarded.

HOSPITAL SURVEY

The Minnesota Hospital Association has prepared a questionnaire which is being mailed to the various hospitals within the state of Minnesota listed in medical and commercial directories. It is the aim of the Association to make a survey of the hospital facilities of the state, both with respect to capacity for the care of patients and the training of nurses. When this survey is completed, the information obtained will be centered in the office of the Association; and any department of the state or national government that wishes to know about the hospital resources of the state can then turn to the secretary of the Association and receive at least approximate information, which is more than is now obtainable through the scattered sources.

The purpose of the survey is not to "standardize" hospitals. The questionnaire is simple, and asks merely such primary questions as are necessary for the compilation of an adequate directory of the many general hospitals, large and small, within the state.

Hospitals in Minnesota that have been opened within the last year should send to Mrs. Geo. G. Eitel, secretary of the Minnesota Hospital Association, Minneapolis, for copies of the questionnaire, as recently established institutions are not likely to be listed in available directories.

HOSPITAL PROBLEMS RESULTING FROM THE WAR

A conference on war time hospital problems was held at the New York Academy of Medicine, 17 West Forty-third street, New York City, beginning Monday, June 3, at 10:30 A. M. The call for this conference was issued by the Ameri-

can Hospital Association's special committee on war service, the members of which are Dr. S. S. Goldwater, late health commissioner of the city of New York, and superintendent of Mount Sinai Hospital; Mr. Daniel D. Test, superintendent of the Pennsylvania Hospital, Philadelphia; Dr. A. R. Warner, superintendent of Lakeside Hospital, Cleveland; Dr. Wm. A. White, superintendent St. Elizabeth's Hospital, Washington, D. C.; and Mr. Richard P. Borden, trustee of Union Hospital, Fall River, Mass. The superintendents of the principal hospitals in the Northwest were invited to the conference. The following tentative program had been prepared:

Income and Expenditures: Effect of Taxes on Donations and Bequests. Proposed Exemption of Legacies from Federal Inheritance Tax; Wages; Cost of Supplies.

Medical Construction: Normal Growth Before the War; Needs of Civilian Population Now; Should Civil Hospitals Attempt to Build Now?—Will the Government Facilitate the Shipment of Materials?

Medical and Surgical Supplies: Need of Stimulating Production and Regulating Distribution.

Labor Supply: Actual Shortage of Paid Workers; Use of Volunteers.

Medical Service Visiting Staff: Extent of Military Enrollment to Date; Limitation of Future Enrollments; Volunteer Medical Service Corps; Possibility of Part-time Military Service. *Interns:* Withdrawals to Date; Commissions and the Period of Inactive Service; Can the Smaller Hospitals Obtain Interns? *Medical Students:* Keeping up the Supply.

Nursing Service: Withdrawals of Graduates and Supervisors; Supply of Pupils; Should the Three-year Course be Abandoned?—Attendants; Voluntary Aids.

Care of Government Patients: Army and Navy—Emergency Cases; Returned (Invalided) Soldiers and Sailors; Location and Capacity of Army and Navy Hospitals; Use of Civil Hospitals. Compensation to Hospital; Compensation to Staff.

Federal Vocational Board: Co-operation with Civil Hospitals; Special Equipment; Training of Teachers in Existing Hospitals; Compensation.

War-Risk Insurance Bureau: Use of Civil Hospitals for In-patients; Care of Out-patients (English and Irish Systems); Compensation.

THE
JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
 H. J. ROWE, M. D. - - - Casselton, N. D.
 H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

JUNE 15, 1918

RELIEF FOR SOLDIERS' FAMILIES

The Hennepin County Medical Society has inaugurated a big movement to care for the families of physicians who may require aid during the absence of the men who have enlisted in the Medical Reserve Corps. The machinery has been set in motion by the appointment of a committee of fifteen which will have entire charge of the raising of necessary funds, the amount of which cannot be determined at present, but it is hoped that it will be possible to accumulate a sum of thirty-six thousand dollars. This was made on the basis of contributions from members of the Hennepin County Medical Society, the minimum of which is to be ten dollars each per month for one year. This amount in itself may be a hardship for a good many of the younger men, but it is expected that some of the older men in more established practice will contribute a much larger sum per month or per year. This, however, is to be worked out by the committee.

The committee is so arranged that it will take charge of districts throughout the city of Minneapolis and perhaps in Hennepin County. Unfortunately, a good many doctors are not very good business men; and not infrequently the doctor allows his accounts to slip along uncollected until finally his patient has such a large bill that it is very difficult to collect. Then, too, in the past physicians have not been able to maintain a very

satisfactory credit; and the writer distinctly remembers that for a good many years doctors were looked upon as poor payers, not that they were dishonest in any way, but they either had not the business faculty or their patients took advantage of them and quit them at the critical bill-collecting period.

However, the enlistment of so many men from the Hennepin County Medical Society, more than sixty now, will make it necessary for the men left behind to subscribe, to over-subscribe, and to continue to subscribe until they give their utmost. If the war is to continue for two or three years it means that a lesser number of medical men will remain at home, and they will have to keep up the payments in order to create a substantial fund for the relief of the families of those in service.

The Society has gone through many experiences of collecting money, and in the main the collections have been satisfactory; but when one considers that there are a number of university instructors and laboratory workers who are members of the Hennepin County Society, and who have comparatively small salaries, it is impossible to count upon a satisfactory amount from any of them; still every man who belongs to the Society should offer to pay something, even if it is much below ten dollars a month. It puts him in a better light before the professional men, and gives him a better opinion of himself; and even the little that he may contribute swells the fund.

The distribution of this fund will be made on a business-like basis, and the editor would like to suggest that this committee and the families who are to receive benefits should be an organized committee and an incorporated body. This in itself will take away any possible charitable element in the work, and make it possible to investigate and to pay out the necessary money for expenses.

THE JOURNAL-LANCET is perfectly willing in every way possible to advance the endeavor, and will heartily co-operate, from a publicity point of view, in the establishment of this fund.

VOLUNTEER MEDICAL SERVICE CORPS

At a special meeting of the Hennepin County Medical Society a volunteer medical service corps was the subject of discussions and it was finally determined that a committee should take charge of the registration and classification of all of the

medical men in Hennepin County. This committee is to include all men who are willing to serve, and also to form the nucleus of this new volunteer organization. The way the young men have drifted into the service the past year shows the necessity of some such measure as has been advocated by the Hennepin County Medical Society, where men may be tabulated, tagged, etc., first, to show their willingness to do some work, the work best fitted for each special case, and to show the people at large that they belong to a department of the army medical service. Undoubtedly, many will join this volunteer corps, men who are over age, who are physically unfit for active army life, and men who have dependents who actually need their presence and their support. Then, too, after this organization has been brought about, the Government will be in better position to know who is willing and able to serve either in army work or in civilian life, and it is quite probable that as the country towns become depleted, city physicians may be urged to go into the country to take the place of those who have gone to war. This may work a hardship upon some men, but there are many men who make a meager living in the city who would make a good living in the country, and the possibilities are that their families would be better off if they were practicing out of the city and over a large territory.

Application blanks for this new corps will be presented to every doctor in Hennepin County before long to be filled out. This will not obligate him in any way, and, even though he may be willing to serve in either the Reserve Medical Corps or the Volunteer Medical Corps, he may not receive a commission; and, if he does, he may have very good and substantial reasons for declining a position, feeling he is best fitted to stay at home and take care of his own personal community.

Hennepin County has started this registration movement, and it ought to be carried to completion so that it may make an impression upon the state at large. As a matter of fact, the country has done better than the cities in enlistments, and we should not be behind them in showing our loyalty and our willingness to co-operate with the civilian and Government groups.

THE APATHY OF PHYSICIANS

It is a rather delicate matter to write an appeal to the apathetic man to urge him to throw off

his slothfulness, his indifference, and to create within himself a spirit of loyalty and desire and willingness to perform duties which come to him through his professional associates.

One of the minor incidents which serves as a reminder for the title of this editorial is the difficulty with which the president of the Minnesota State Medical Association meets in selecting men who are willing to serve on committees. A recent president told the writer not long ago that he was perfectly amazed at the unwillingness of men to serve on committees which were sometimes committees merely in name, and on others that were important and required some work on the part of the individual members. This president received so many refusals to co-operate in this line that he had great difficulty in filling up the committees he had to appoint. This is doubtless true also in other states.

There are a great many young men in the medical profession who must some time carry on the work of the older men who have labored for the success of the profession. Perhaps there is something behind this, perhaps the younger man feels that the older men are attempting to run things, and he declines to co-operate with them mainly on this ground. Nothing can be farther from the truth than such a belief. The older men perhaps dominate the committee work because they are more or less experienced in such things, because they have long served on committees, and, further, for the reason that the younger man has had insufficient experience to fit him for many of the efforts that the committee undertakes. There is no reason why the young man should not become an active worker, and an active member of all committees; and, as time goes on and as the war goes on, his services will be required even if he has to be drafted onto a committee.

Then, too, as has been suggested before, physicians are apathetic about their business. They let it run along leisurely, sometimes from sheer laziness, sometimes because they consider the business side of the profession undignified. They dislike to talk business with their patients. They frequently do not have an understanding with their patients as to what is expected from them from a business point of view. Not all men do this way by any means. There are many medical men in the profession who have organized their professional work with its business side as a close adjunct to the professional side, and thereby have raised themselves in their own estimation

and in the estimation of others; and they are succeeding in their business because they are business men. This may account for the better credit which is now evident in the medical profession; but when one analyzes the matter carefully it does not extend far enough into the professional life. There is little or no criticism by patients toward the business end of the professional man's work; in fact, they respect him more and pay their bills more promptly if he urges them to do so. Then, too, this lack of business method and this apathy, from a business point of view, creates pauperism—medical pauperism—one may say. People begin to feel that they may encroach upon a physician's time and ask him to do unnecessary work because they know he is easy-going and indifferent. The result is that there are a lot of hangers-on, many patients of the medical profession that eventually become blood-suckers and vampires. Most of them will be eliminated if given a good sensible exposition of the business end of medicine and are made to understand that the doctor must live, must maintain his family, and that his expenses are sometimes enormous.

The doctor who travels around the country and visits these nearly pauperized people, some of them in good circumstances, wastes most of his time and usually comes out with less professional credit than he deserves. We all know that the people at large are not very complimentary toward the medical profession, and they switch from one doctor to another, or go from one cult to another because they do not believe in doctors or medicine. These people are much better off, than on, one's books. They would thus save the doctor a lot of time and needless worry, and a great deal of labor which he can employ better by reading medical journals or medical books.

This apathy extends into the county, district, and the state medical societies. Considering that there are about 2,400 doctors, for instance, in Minnesota, and that now less than 1,400 of them are members of the State Association, it means that 1,000 men are wandering about with comparatively little medical interest. These men might better be drafted into a county society, invited to talk, invited to write papers and to take part in the work of the society as a whole, but it is almost incredible to believe that men are so indifferent to their medical societies. These

men who stay away from the county society or the state association get stale, and lose not only their interest in medicine, but they soon become "back numbers" in the medical world, and it is largely due to the fact that they are purely and simply apathetic. Of course, out of this thousand wanderers who are outside of the societies there are many malcontents—men who do not care to hear papers, to read papers, or to attend meetings. Those who really do not care are useless and valueless in medical societies. When one considers, too, that the average attendance of the State Association in numbers is comparable to the membership of the Hennepin County Society, it means that a good many men are indifferent. Even the larger societies do not escape criticism, and with the large membership the attendance at the monthly or bi-monthly meetings is sometimes ridiculously small; but it should be the duty of all men as far as possible to attend their medical societies, for no man knows too much medicine, and if he has any red blood in his veins he can grasp an idea which is perhaps not new, but one which he has forgotten and does not use in his private practice. He gets such ideas when he associates with medical men. The idea, too, that specialists should segregate themselves and not attend to the general meeting of their county society or state association, means that they are getting more and more narrow, and look at their patients from their own special point of view, and they are therefore poorer doctors. Every surgeon should seek the views of the man in internal medicine. It was frequently remarked during Minneapolis Clinic Week that many men would have attended clinics other than those in their own special line of interest.

What are you going to do about it? Are you afraid to join your society because some doctor may criticise you? Are you afraid to get up and talk at these meetings because you may not be able to express yourself as clearly as others? Are you afraid to try to write a paper or give a clinic? If so, your best school is the school of experience and exertion, and if you want to advance and keep up with the times, if you want to become a good speaker, writer, or clinician, you must exhibit yourself before a medical audience, and, even though some of your conclusions are not good, or may be simple and well-known, yet you soon learn that, in order to speak well,

you must have something in your mind that is well worth getting out of it, and you will also be of some benefit to your audience.

Some men are apathetic about the medical side of the war, but, undoubtedly, many men who are qualified, fitted, and able to leave their business, would go to war if they were not apathetic. Now, the time is coming when we must all face this situation, and make a very strong effort to get into line with the volunteer army medical corps.

THE REPORT OF MINNEAPOLIS CLINIC WEEK, AND A LESSON DRAWN THEREFROM

The third, and final, part of the report of the clinics given during Minneapolis Clinic Week, appears in this issue; and we reluctantly call attention to a notable shortcoming in this report, one which we think demands attention because it is only too characteristic of medical men.

This report was undertaken by the Executive Committee having the work in charge, to show the character and the amount of work done in the clinics of nearly a score of private and public hospitals, such as are found in very few cities the size of Minneapolis. Strenuous efforts were made to get a report of every clinic given during the week; but, in spite of the fact that a brief report could be made in a few minutes, some of our best men who presented cases of special interest to the general practitioner, as well as to the surgeon, could not be induced to make reports.

We never wish to make harsh criticisms, but some things demand characterization in plain language, and failure under consideration seems to be one of such things.

The man who accepts a specific or a general invitation to take part in a professional effort to accomplish worthy public and professional ends, and then neglects to do a further and vital part in the plan of gaining such worthy ends, exhibits an inexcusable discourtesy to the men who extended the invitation to him and to the larger body represented by the Executive Committee, and brings discredit upon the profession and upon himself.

Further comment is unnecessary, except to say that some clinics were prepared and not given, some clinicians were absent or sick, and a few have been absent since the clinics were given. Of course, under such circumstances, no criticism applies.

MISCELLANY

REPORT OF THE COMMITTEE OF THE HENNEPIN COUNTY MEDICAL SOCIETY ON PLAN TO SERVE THE INTERESTS OF MEN IN THE ARMY

This Committee met several times during the winter and spring, the last meeting being on May 16. The purpose for which it was created was to devise means and methods to prevent, as far as possible, hardships befalling the families and dependents of those of our members who, at the call of the Nation, have entered her service in the medical corps. We all know that in many instances such service has been entered into only at a considerable sacrifice; that the financial return in the army is far below what was often earned in civil practice; that medical officers are often no longer young, and the majority have families dependent on them; that, while supporting their families, they must also support themselves in a manner befitting an officer; that many have left behind them obligations, such as life insurance, mortgages, and debts, easily enough carried on from their earnings from civil practice, but for which their incomes in the Army are entirely inadequate; and that, therefore, it is inevitable that hardships will arise, and have already arisen, in individual cases. In what way may these conditions be met and these hardships minimized? This question has appeared to the Committee so important and so urgent that it decided unanimously to request the President of the Society to call this special meeting to listen to its report, and formulate some plan of action to meet the condition.

The Committee feels, and it is sure that every member of the Society feels, that this is an obligation resting on our profession, and that it must be met and borne by those of us who are obliged to remain at home. The question is largely one of money. In this most serious time of the world's history and of the history of this country, the keynote of all our actions, and of the actions of everyone of us, must be sacrifice. Those who have gone away have sacrificed much, and we at home must also sacrifice much; and practically the only way in which we can sacrifice is by going without and giving from our incomes. As the war goes on the need for such action as is here contemplated, will without ques-

tion become more manifest; we realize it more now than we did a year ago.

A year ago it was thought that the necessary help could be given by returning to the absent doctor, or his family, one-third of the fees collected from his former patients. This plan has not worked out, and has proven impractical.

Your Committee, after very full deliberation, has formulated a tentative plan which it feels confident will succeed if it receives the full and continuous support of all the members of the Society. It does not mean that those who go away will suffer no hardship,—in these days of stress such a result is impossible,—but it does mean that we who remain at home must also carry on the work and feel the pinch of the times in which we live, and that we must give up and give up until *our* burdens equalize those of the men who enter the army.

The plan is as follows:

1. A fund to be created which may be drawn upon to supply, or supplement, the needs of medical army officers, members of this Society, in the care of their dependent families.

2. The amount of this fund necessary is at present an unknown quantity. The Committee has no means as yet of even guessing at the amount which will be required, but, as time goes on and the needs develop, the required amount will become evident. It is feared it may be large, and it is certain that its necessity will be prolonged over the duration of the war and even beyond.

3. The source from which this fund must be derived can come only from volunteer subscriptions by members of this Society.

4. Therefore, it is suggested that a subscription be made by each member of the Society for the period of one year, to be paid in twelve equal monthly payments. These amounts will be deposited in a designated bank, to draw interest until withdrawn, and subject to draft on the signatures of designated members of a permanent committee to be later nominated. After the need of such a fund is ended any amount remaining will be apportioned back to the subscribers.

There are over 300 members of our Society who are still in active civil practice, and this Committee feels that an average of \$10 per month would not work an unbearable hardship on any of us. Some will be able to subscribe much more, and some few possibly less; but it is a foregone conclusion that the name of no member of our Society will fail to appear on the list. This will give a fund of \$3,000 per month, or \$36,000 for the coming year.

At present there are about 60 members who are in active service, and the recent call will increase this number, and it is anticipated that such a sum will help those in stress over the hard spots.

(a) How may this fund be raised with certainty? It is the suggestion of the Committee that the members be divided into groups, and that each group be assigned to a solicitor selected from our body, who will per-

sonally call on each member of his group for his subscription.

(b) That then these subscriptions be turned over for collection to the bank designated as the depository of the fund, and that the bank shall every month draw on the member for one-twelfth of his subscription.

(c) It is estimated that one solicitor can conveniently take care of a group of fifteen, and therefore the Committee will move, through its chairman, that the president be empowered to create such a board of solicitors, to consist of twenty members, for the purpose of making this canvas of the Society, and obtaining these subscriptions. The solicitors will report to the permanent committee to be nominated, which in turn will report to the Executive Committee, and through the latter the activities to date will reach the Society at large.

6. It is suggested that the permanent committee to be nominated shall act for one year. That it shall have control of the fund; that it shall investigate cases as they arise; and that it shall have power to disburse the fund as it sees fit, in relief of such cases, either by gift or by loan (with or without interest), or in any other way as in its judgment seems best.

In conclusion, the Committee wishes it clearly understood that it does not consider the distribution of this fund as in any sense the giving of charity. Those who accept assistance from it shall consider it as a supplemental and just income which the Government would like to, but cannot, afford to pay, and that those of us who contribute also consider it in the same light, so that no stigma of accepting and giving charity may attach to such transaction between any members of the Society.

It is understood that if a subscriber enters the service his obligation ceases, and the amount previously subscribed may be withdrawn if he so desires.

Committee:

H. B. Sweetser, Chairman.
J. Hvoslef, Secretary.
A. W. Abbott,
H. H. Kimball,
J. W. Bell,
R. E. Farr,
C. J. Ringnell,
W. R. Murray,
E. K. Green,
J. G. Cross,
C. W. Pettit,
Norman M. Smith,
J. C. Litzenberg,
G. D. Head,
J. P. Sedgwick.

NATIONAL MEDICAL DEFENSE IN NORTH DAKOTA

The North Dakota State Committee of the Medical Section of the Council of National Defense met in Fargo on May 19. Nine of the twelve members were present. The committee was enlarged by the addition of the names of Dr. T. M. MacLachlan, Dr. F. W. MacManus, and Dr. A. A. Whittemore.

The chief matters for consideration were the following: The state quota of 50 men in the

recent call for 5,000 more enlistments in the M. R. C., and the organization of the Volunteer Medical Corps, which is proposed by the Government, and which is to include men who are ineligible or who cannot be spared for military service.

An executive committee consisting of Drs. C. J. McGurran, H. J. Rowe, Paul Sorkness, F. R. Smyth, and G. M. Williamson was appointed to perfect the plans for the Volunteer Medical Corps, and to pass upon applications.

It was decided to issue a questionnaire to every physician in the state. Copies of the questionnaire have already gone out, and every member of the profession is urged to give it careful consideration. Replies should be in the hands of the Chairman, Lieut. V. H. Stickney, M. R. C., not later than June 10. The information called for will be carefully filed, and will enable both the larger committee and the sub-committee on the Volunteer Medical Corps to act, and to advise intelligently.

A letter from H. H. Moore, Secretary of the Committee for Civilian Co-operation for combating the venereal diseases was read, and the plan suggested for Federal control, with money to be appropriated by Congress and the State, was approved and recommended to the State Council of National Defense.

Medical profiteering in the form of physicians moving away from rural communities to cities where they are in need, but for the purpose of taking advantage of the absence of men in the Medical Reserve Corps, was discussed and referred to the State Council of National Defense.

BOOK NOTICES

IMPOTENCE AND STERILITY. With Aberrations of the Sexual Function and Sex-Gland Implantation. By G. Frank Lydston, M. D., D.C.L., formerly Professor of the Surgical Diseases of the Genito-urinary Organs and Syphilology in the Medical Department of the State University of Illinois; Member of the American Urological Association; Fellow of the American Medical Association; Member of the Society of Authors, London, England, etc. Chicago: The Riverton Press. 1917. Price, \$4.

This is a monograph on diseases and aberrations of the sexual functions. It takes up fully the physical deformities of the sexual organs.

The functional sex diseases, usually left entirely to quacks, are treated herein in a scientific manner, and sex-perversions are discussed at great length. The various forms are treated as clinical entities, with an abundance of case-records.

After reading these chapters, one wonders if the author, in his enthusiasm, has not gone too far, and that his classification simply subdivides and treats as distinct diseases the symptoms complex usually taken up under the various disorders of the mental faculties.

His experiments in sex-gland implantation are of interest and of scientific value in showing that glands taken from the body after death can be transplanted and live. As this subject is in its experimental stage, the rationale of such a procedure is a question still open for discussion.

—OLSON (O. A.)

A PRACTICAL TEXT-BOOK OF INFECTION, IMMUNITY AND SPECIFIC THERAPY with special reference to immunologic technic. By John A. Kolmer, M. D., Dr.P.H., M.Sc., Assistant Professor of Experimental Pathology, University of Pennsylvania, with an introduction by Allen J. Smith, M. D., Professor of Pathology, University of Pennsylvania. Second edition thoroughly revised. Octavo of 978 pages with 147 original illustrations, 46 in colors. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$7.00 net; half morocco, \$8.50.

The book opens with a comprehensive and detailed account of the technic of obtaining blood from the experimental animal and of preparing the constituents for the numerous tests. Under the various chapters, the clinical application of immunology is described, from the giving of a luetin test to lumbar puncture for serum-administration. A chapter on experimental work in the laboratory is added for the use of students. It would undoubtedly be valuable also for the doctor who wished to keep in touch with recent laboratory procedures.

Historical sketches of the development of the principles of infection and immunity, as well as biographies of the leading investigators of each, preface many chapters. The important definitions and conclusions are italicized, so that one can get a good survey of the subject by reading the italics only. The old and established principles of immunology are explained, and the newer methods and experiments discussed. Diagrams are used frequently, and abundant references are given to recent researches.

Vaughn's theory of bacterial proteins is discussed; the treatment and prevention of diseases by vaccines and serums is outlined from the established worth of smallpox vaccination to the still experimental use of immune serum in poliomyelitis and pneumonia. Space is given to every disease that has been subjected to immunological research, from pregnancy to pellagra, and from cancer to cholera.

—HANSEN.

OBSTETRICS. Edited by Joseph B. DeLee, A.M., M. D., Professor of Obstetrics, Northwestern University Medical School, with the Collaboration of Eugene Cary, B.S., M. D., Assistant Gynecologist, St. Luke's Hospital. Practical Medicine Series, 1917. Cloth. Price, \$1.35. Pp. 224, with illustrations. Chicago: Year Book Publishers, 1917.

This little volume is very good for a hasty review of latest subjects in obstetrics by the general practitioner. Eclampsia is handled at length, and well reviewed.

In the chapter devoted to labor the author lays stress upon the great value of freedom from danger of rectal examinations in preference to vaginal.

An attachment for the stethoscope in facilitating the observation of fetal-heart sounds is an advance.

Anesthesia in labor is well covered, and the "twilight-sleep" bubble is punctured in several places.

A chapter is devoted to the pathological conditions commonly seen in the new-born, and closing the work a general review of obstetrics in general is given.

DeLee gives very useful notes all through as to his personal experience in regard to the subject under discussion.

—AURAND.

MATERIA MEDICA, PHARMACOLOGY, THERAPEUTICS, AND PRESCRIPTION-WRITING. For Students and Practitioners. By Walter A. Bastedo, Ph.G., M.D., Assistant Professor of Clinical Medicine, Columbia University. Second Edition, Reset. Octavo of 654 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$4.00 net.

This volume is an adaptation, for the most part, of lectures delivered by the author at Columbia University.

The author acknowledges the works of Cushman, Sollman, Howell, Starling, von Noorden, Mackenzie, Lusk, and others, and also the Herter and Harvey lectures.

Numerous charts and tracings illustrate the work and in all it is worthy of consideration.

The chapter on digitalis is especially worthy of mention.

—PEPPARD.

AN INTERMEDIATE TEXTBOOK OF PHYSIOLOGICAL CHEMISTRY, WITH EXPERIMENTS. By C. J. V. Pettibone, Ph.D., Assistant Professor of Physiological Chemistry, Medical School, University of Minnesota, Minneapolis. St. Louis: C. V. Mosby Company, 1917. Price, \$2.50.

This manual was originally written for medical students, and contains the essentials of both the theory and the laboratory technic. The author states in his preface that he has "attempted to avoid confusing the beginner with lengthy discussions of debated points, but to set forth as clearly as possible the present status of our knowledge." He has admirably accomplished his purpose.

The book satisfies a distinct need, and should be in every physician's library.

—GARDNER.

BLOOD-TRANSFUSION, HEMORRHAGE AND THE ANEMIAS. By Bertram M. Bernheim, A. B., M. D., F. A. C. S., Instructor in Clinical Surgery, The Johns Hopkins University; Captain Medical Officers' Reserve Corps, U. S. A.; Author of "Surgery of the Vascular System," etc. Philadelphia and London: J. B. Lippincott Company, 1917.

Despite the splendid results obtained with whole blood in accidental hemorrhages, purpura, hemophilia, and hemorrhagic diseases of the new-born, blood-transfusion was not used as often as it should have been on account of the difficulties of the technic and the hidden dangers of hemolysis and agglutination; but since the introduction of simple methods of grouping donors and the use of Lewisohn's citrate method the transfusion of whole blood has become a medical rather than a surgical procedure.

Bernheim takes up the history of transfusion, indications, and technic in a most thorough way, and, in addition, gives the reader the benefit of his wide experience by describing in detail a number of cases.

While describing every method of merit, he apparently favors the citrate method as a routine procedure since citrated blood has been proven to be safe and equal to fresh blood.

This volume covers in concise form the whole subject, and should prove to be of interest to every physician.

—SCHAAF.

THE SPLEEN AND ANEMIA. Experimental and Clinical Studies. By Richard Mills Pearce, M. C., Sc.D., Professor of Research Medicine; with the assistance of Edward Bell Krumhaar, M. D., Ph.D., Assistant Professor of Research Medicine, and Charles Harrison Frazier, M. D., Sc.D., Professor of Clinical Surgery, University of Pennsylvania. 16 illustrations, color and black and white. Philadelphia: J. B. Lippincott Company, \$5.00, 1918.

An immense amount of experimental work regarding the relation of the spleen to blood diseases is gathered together in this volume. A good deal of the experimental and metabolic work is of fundamental character, showing how the red and white cells behave after splenectomy in a normal animal and over a long post-operative period. The work on metabolism and its relation to splenectomy is largely negative in result.

Relative to the review of the clinical experimental work cited by the authors, no credit is given to Blankenhorn nor is a proper appreciation shown of the duodenal method of estimating hemolysis. There is no question of the reliability of this relatively simple method. Giffin, Sanford, and Szlapka have recently published in the *American Journal of the Medical Sciences* a total of 119 tests in 89 cases, and seem to find no difficulty in securing reliable values, as measured by the post-operative pathology found.

The authors do not seem to have given the method a clinical trial.

Frazier covers in Part III of the book surgical observation on the technic of splenectomy.

—SCHNEIDER.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. By leading members of the medical profession throughout the world. Edited by H. R. M. Landis, M.D., Philadelphia, U. S. A. Volume IV. Twenty-seventh series, 1917. Philadelphia: J. B. Lippincott Company.

This volume contains 314 pages, 297 illustrations, and is printed on a fine quality of paper and is full of good, practical instruction. I take the liberty to quote from a number of writers as most interesting.

Dr. F. H. Albee describes a very practical method of correcting lateral deformity of the ankle-joint; and Dr. A. D. Bevan gives a most interesting surgical clinic.

Dr. G. G. Davis says, "The production of all luxations is governed by one principle, that of hyperextension."

Dr. F. H. Lahey asserts that "Success in these thyroid cases under local anesthesia depends on gentleness of manipulation, and there is no place for hasty pulling and hauling in this kind of surgery."

Drs. Clinton K. Smith and F. M. McCallum say, "When dealing with pathological conditions, causing abdominal pain, unless stone in the ureter can be ruled out by some diagnostic factor directly in favor of the other condition, a complete urological examination should be made."

Dr. C. G. Cumston says, "When the dura mater has been perforated, and when the cerebral lesions are extensive, death is the usual outcome."

Dr. Julius Grinker says of multiple neuritis that

"Because of its frequency and favorable prognosis this disease deserves careful attention."

Dr. J. C. Litzenberg says "Early and frequent observations of blood-pressure (together with urine examinations) is the surest method of detecting the toxemia of pregnancy."

Dr. H. H. Grant says, "When a malpractice suit is often instituted even after the best possible result has been obtained, we are going to resort more and more to the open method of treating fractures."

Drs. J. Speese and P. G. Skellern say, "In every case of pernicious anemia an attempt should be made, by close study and observation, to ferret out the basic etiologic factor of the blood hemolysis."

Dr. B. R. Tucker says "The success of brain surgery, so far as tumors are concerned, depends largely upon an early diagnosis, an accessible location, the nature of the growth, and the skill of the surgeon."

Dr. E. Meroz, dealing with tumor of the heart, says, "The presence of these neoplasms during life is usually unrecognized."

Dr. M. Neustadter, in a chapter on mental backwardness in children, says, "All measures must be attempted early if some degree of success is to be attained, for as the child grows its brain-cells adjust themselves to their environment, and to begin late would mean to attempt the impossible."

Dr. G. J. Saxon in "Food Facts," says, "The modern treatment of diabetes is giving the community very definite ideas about diet and the desirability of maintaining the body in the best possible physical condition."

Dr. W. A. Steel says, "Transfusion of blood from self-cured septic cases has a curative action on patients suffering from chronic septicemia or pyemia."

—BESSESEN.

NEWS ITEMS

Lieut. R. L. Laney, of Brown Valley, now at Camp Dodge, has been made a captain.

Lieutenant J. J. Donovan, of Litchfield, has been promoted to the rank of captain.

The Montana State Medical Association holds its annual meeting in Butte on July 10 and 11.

The Blue Earth County Medical Society met at Fairmont last month with a good attendance.

Dr. E. W. Hayes, of Brown Valley, is at the Trudeau Sanatorium, where he will spend six months.

Dr. F. L. King, of Elbow Lake, has moved to Milaca. He takes over the practice of Dr. A. G. Phelps.

Dr. William C. Carroll, of St. Paul, was married on June 5 to Miss Loretta R. Walsh, of Minneapolis.

Minnesota is asked to enlist 450 nurses for Red Cross service, and most of them must be obtained in the Twin Cities.

Lieut. A. J. Wentworth, of the Mankato Clinic, is now stationed at Park Field, Tenn., and has been given a captaincy.

The short social-service course of lectures now under way in the Wilder Charity building in St. Paul, has attracted over forty students.

Lieut. F. N. Bjerken, of Red Wing, who now is at New Orleans taking special work in surgery, has been made a captain in M. R. C.

Dr. B. E. Wiley, of Kalispell, Mont., was married last month to Mrs. J. K. Scott, of Helena, in which city Dr. Wiley will hereafter practice.

The call for nurses for Army and Red Cross work is becoming more urgent and, apparently, more difficult to meet than the call for doctors.

Although medical and divinity students who became of age on June 5 were required to register, they are not subject to draft if they registered.

A few doctors, as well as many non-professional men, are undergoing operations to remove physical obstacles to their enlistment for military service.

Dr. John J. Pemberton, of Rochester, was married on June 4 to Miss Anna Hogeland, also of Rochester. Dr. Pemberton is on the Mayo clinic staff.

The program of the thirty-first annual meeting of the North Dakota Medical Association, to take place in Fargo June 19 and 20, appears on another page.

Dr. G. G. Cottam, of Yankton, S. D., has received his commission as captain, and Dr. Martin L. Stiffler, also of Yankton, his commission as first lieutenant, in the M. R. C.

The Twin Cities are well represented on the program of the Southern Minnesota Medical Association's forthcoming meeting, with five St. Paul and twelve Minneapolis men.

Dr. Edward D. Armstrong, a recent graduate of the University of Minnesota, is now an assistant surgeon in the Naval Reserve Force and is located at the Great Lakes Training Station.

Dr. B. H. Sprague, of the Sprague Hospital, Huron, S. D., has joined the M. R. C. Huron has sent two other doctors. Dr. T. J. Wood is a major, and Dr. O. L. Wright is a lieutenant.

All of the ten nurses who will graduate from the Winona General Hospital in September have announced their intention to enter the Red Cross or Army service. This is 100 per cent loyalty.

The transactions of the annual meeting of the South Dakota State Medical Association held

in Mitchell, on May 21-23, will appear in our next issue together with the roster of the association.

The annual examination of applicants for Minnesota licenses as embalmers will be held by the Minnesota State Board of Health, on the University Campus, Minneapolis, 9 A. M., July 17, 1918.

Dr. Ralph St. John Perry, of Minneapolis, captain in the M. R. C., is pushing an organized movement to get the surplus of physicians in cities distributed in the country where they are so badly needed.

Dr. P. M. Hall, of Minneapolis, is now acting as temporary superintendent of the Minnesota Sanatorium for Consumptives, the former superintendent, Dr. George W. Beach, having resigned to enter the military service.

Mrs. Catherine Olinger, of St. Paul, has been appointed state protective officer in the Division of Venereal Diseases of the Minnesota State Board of Health. Her work will be on the streets among women and girls.

A recent cablegram announces that Lieut. Bernhard Gallagher, of Waseca, a recent graduate of the Medical School of the University of Minnesota, is a prisoner in Germany. He was listed among the missing in April.

The Southern Minnesota Medical Association meets at Winona on June 24 and 25. The program is a long and elaborate one. A river trip on the steamer "Minnesota," upon invitation of the Drs. Mayo, is among the entertainments.

The Pilon Hospital at Paynesville, which has been closed since Dr. Pilon went to France, is again open. It is now in charge of Drs. Sandven and Benson, of Willmar. Dr. Sandven will be in active charge, and Dr. Benson will remain in Willmar.

The Minnesota Medical Women's Association sent a resolution to President Wilson asking that qualified women physicians and surgeons be permitted to join the M. R. C. with the same "rank, pay, and emoluments men receive for the same or equivalent service."

Maternity Hospital, of Minneapolis, an institution that has been a credit,—yes, an honor,—to the city, proposes to extend its services, hitherto confined to unmarried women, to married women whose husbands cannot pay for suitable services during the lying-in period.

Columbus Hospital, of Great Falls, Mont., graduated nine nurses last month. As all of the members of the class will enter Red Cross work,

the graduating exercises were made a patriotic service by the city, and they were exceedingly impressive, as became such an event.

The second series of poliomyelitis clinics held in the larger cities of Minnesota during the past two months shows that really remarkable results have followed the proper treatment of persons who had the disease, and also that the disease seems to be almost wholly disappearing from the state.

The New York *Evening Mail* said the nurses in the Base Hospital Unit No. 26, generally known in Minnesota as the "University Unit," made the best appearance of all the nurses in the great Red Cross parade that marched through the streets of that city last month. There were 15,000 nurses in the parade.

The American Medical Association has been in session this week; and reports of its proceedings will be looked forward to with unusual interest, as at this meeting medical conditions produced and growing out of the world war will be discussed by distinguished American and European medical men.

Mr. Fred H. Stangl, a brother of Dr. Fred Stangl, of St. Cloud, took high honor in the recent examination of candidates for the fifty internships in the Cook County (Chicago) Hospital. Dr. Stangl, who graduates from Rush this month, stood twelfth in the list of over three hundred who took the examination.

The North Dakota Pennant is a wide-awake, but diminutive, sheet published by the Anti-Tuberculosis Association of that state once a month under the direction of Dr. J. Grassick, the president of the Association. It collects information concerning health work needed by the state that is invaluable.

Dr. Walter H. Valentine, of Tracy, came to Minneapolis to hear Major Jump at the notable meeting held here last month. Dr. Valentine was ready to tender his services, but Major Jump told him his duty was at home because of the large territory he is covering. The incident shows that a physician may be needed at home more than abroad.

Of the 240 nurses who took the last Minnesota examination, only 53 failed to pass, thus leaving 187 new graduate nurses eligible for Red Cross work. An extra examination will be held on July 5 and 6. Nurses who are to graduate by September 1 may take this examination. Appli-

cations should be made to Miss Lydia H. Keller, Lowry building, St. Paul.

Several physicians in the Northwest who failed to volunteer for the M. R. C., have been drafted for regular army work, and, of course, as privates in the ranks with the trenches in sight. Can young physicians afford to take the risk of going into the service of their country in a work for which they are illy fitted when they are sorely needed in a capacity for which they alone are especially fitted?

The Brown-Redwood County Medical Society held its annual meeting at New Ulm last month. Dr. W. O. Pearce, of Minneapolis, recently returned from France, spoke upon child-welfare work abroad. The following officers were elected for the current year: President, Dr. A. W. Eckstein, Comfrey; vice-president, Dr. F. J. Pelant, New Ulm; secretary-treasurer, Dr. G. F. Reineke, New Ulm.

The Freeborn County Medical Society held its annual meeting at Albert Lea on June 5. The Society decided to pay the dues of members in the service to both the county society and the state association. A committee was appointed to make a service fee-bill. The old officers of the Society were re-elected, and are as follows: President, Dr. J. P. von Berg; vice-president, Dr. W. L. Palmer; secretary, Dr. R. G. Stevenson; treasurer, Dr. J. R. Nannestad.

The Medical School of the University of Minnesota will give in its summer session six weeks' courses in both undergraduate and graduate work, the latter being of special interest to practicing physicians and to graduate men seeking masters' or doctors' degrees. These courses are very helpful and are exceedingly thorough. The daily clinics and the daily rounds of the University Hospital are open to visiting physicians, and they may also take courses in the laboratory branches.

PHYSICIANS LICENSED TO PRACTICE IN MINNESOTA AT THE APRIL (1918) EXAMINATION

BY EXAMINATION

Anderson, Edward D. U. of Minnesota, 1918
Caldwell, Kenneth S. U. of Minnesota, 1918
Colby, Woodward L. U. of Minnesota, 1918
Gamble, Joseph W. U. of Minnesota, 1918
Hall, William W. U. of Minnesota, 1918
Kalin, Oscar T. Rush, 1916
Kooiker, Herman J. U. of Minnesota, 1918

Larson, G. Arthur. U. of Minnesota, 1917
Lundquist, Elmer F. U. of Minnesota, 1918
McCarthy, Donald U. of Minnesota, 1918
McKittrick, Leland S. Harvard, 1918
Rivers, Andrew B. Creighton, 1917
Snell, Albert M. U. of Minnesota, 1918
Stangl, Fred H. Rush, 1918
Swendsen, Carl G. U. of Minnesota, 1918
Sybilrud, Hjalmar W. U. of Minnesota, 1918

BY RECIPROCITY

Anderson, Lionel A. Washington U., 1916
Atkinson, Norman E.,
Kentucky School of Medicine, 1898
Goodson, Catherine M.,
So. Homeo. Med. Col., Md., 1902
Mackoy, Frank W. U. of Illinois, 1905
Niles, Charles M.,
Chicago Homeo. Med. Col., 1900

RECENT NEW ASSIGNMENTS OF NORTH- WESTERN MEDICAL OFFICERS

Minnesota—

To Camp Dodge, Iowa: Lt. M. Seham, Minneapolis.
To Camp Lewis, Wash.: Capt. H. S. Jones, Minneapolis; Lt. S. O. Walkiowiak, Duluth; Lt. W. H. Conner, Finlayson; Lt. G. F. Hartwig, Young America.
To Fort Oglethorpe, Ga.: Lt. G. V. Lynch, St. Paul.
To Chicago (Northwestern Med. School): Lt. W. H. Halloran, St. Paul.
To Washington, D. C. (Surgeon-General's Office): Major C. H. Mayo, Rochester.

Montana—

To Camp Lewis, Wash.: Capt. D. A. McClennan, Cascade; Capt. J. T. Foley, Lewiston; Lt. Wendell Cotton, Forsyth.
To Fort Riley, Kas.: Lt. C. E. Emery, Butte.
To San Francisco, Calif.: Capt. M. A. Darland, Anaconda.

South Dakota—

To Fort Riley, Kas.: Lt. O. W. Tusialo, Bellefourche.

Transfers

MINNESOTA OFFICERS

Lt. W. R. Winne, Rochester, from Camp Grant to Fort Riley, Kas.
Lt. W. A. Meierding, Springfield, from Camp Grant, Ill., to Fort Riley, Kas.
Capt. G. N. Norris, Annandale, from Camp Shelby, Miss., to Fort Snelling, Minn.
Lt. I. G. Wiltout, Minneapolis, from Camp Grant, Ill., to N. Y. City.
Lt. M. A. Desmond, Glenwood, from Army Medical School to Camp A. A. Humphreys, Va.
Lt. R. E. Spinks, Middle Run, from Camp Grant, Ill., to Camp Crane, Pa.
Lt. P. W. Giessler, Minneapolis, from N. Y. City to Camp Crane, Pa.
Capt. R. T. Knight, Minneapolis, from Williamsburg to Camp Crane, Pa.

Capt. J. C. Wilkinson, Red Lake Falls, from Dallas, Texas, to Camp Kelly, Texas.

Lt. H. B. Marsh, Rochester, from Army Medical School to Camp Lee, Va.

Lt. H. W. Arndt, Paynesville, from Army Medical School to Camp Sevier, S. C.

Lt. B. T. Bottelfson, Halstead, from Jefferson Barracks, Mo., to Chicago (Northwestern Medical School).

Capt. W. S. Nickerson, Long Lake, from Fort Leavenworth, Kas., to Fort Crockett, Texas.

Lt. E. J. Engberg, St. Paul, from Camp Doniphan, Okla., to Fort McPherson, Ga.

Lt. J. J. O'Hearn, Rochester, from Camp Grant, Ill., to Hoboken, N. J.

Lt. J. D. Waller, Wilmet, from Camp Grant, Ill., to Madison, Wis.

MONTANA OFFICERS

Lt. F. I. Arnold, Billings, from Camp Lee, Va., to Blacksburg, Va.

Lt. M. T. Vomholt, Glasgow, from Camp Dodge, Iowa, to Chicago (University of Chicago).

SOUTH DAKOTA

Lt. Walton C. Moodie, Elk Point, from Army Medical School to Camp A. A. Humphreys, Va.

Lt. Frank C. Smith, Yankton, from Camp Lewis, Wash., to Manila, P. I.

PROGRAM OF THE THIRTY-FIRST ANNUAL MEETING OF THE NORTH DAKOTA STATE MEDICAL ASSOCIATION

General Session

Wednesday Morning, June 9, 10:00 o'Clock

Invocation, and unfurling of Flag of Service in honor of the members of the Medical Profession of the State of North Dakota who have been commissioned to serve the Government in the World War Bishop J. Poyntz Tyler, Fargo
Address of Welcome.....Mr. Aubrey Lawrence, Fargo
Response.....Dr. James Grassick, Grand Forks
President's Address
Dr. George M. Williamson, Grand Forks

PAPERS

Some Observations in Gall-Bladder Surgery.....
.....Dr. J. W. Bowen, Dickinson
Temperosphenoidal Abscess, with Report of Cases....
.....Dr. A. D. McCannel, Minot
Ophthalmia Neonatorum: The Cause of Preventable
Blindness.....Dr. H. J. Friesen, Grand Forks

Wednesday Afternoon, 2:00 o'Clock

The Etiology and the Treatment of Acute Poliomyelitis. This subject will be fully illustrated by moving pictures
.....Dr. Edward Carl Rosenow, Rochester, Minn.
Local Anesthesia in Inguinal Hernia.....
.....Dr. A. W. Ide, Brainerd, Minn.
Colloid Carcinoma of the Abdominal Viscera, with Report of Cases and Exhibition of Patient.....
.....Dr. M. W. Roan, Bismarck
Angioneurotic Edema, with Report of Case.....
.....Dr. E. A. LeBien, McHenry

The Annual Banquet, 6:30 p. m.

With a Field Ambulance in France.....
Colonel William Webster, D. S. O., Winnipeg, Can.

Thursday Morning, 9:00 o'Clock

A Case of Megacolon with Unusual Complications, with Report of a Case five years after the Radical OperationDr. Nils Tronnes, Fargo
Discussion opened by Dr. James Grassick, Grand Forks.

Injuries to Peripheral Nerves as Observed in Soldiers Returned to This Country for Reconstructive Work and Care. Illustrated by drawings and lantern slides.....Dr. Alexander Gibson, Winnipeg, Can.
Bone and Joint Clinic.....
.....Dr. Alexander Gibson, Winnipeg, Can.

Thursday Afternoon, 2:00 o'Clock

Diagnosis of Urinary Calculi. Illustrated by lantern slides.....Dr. H. G. Woutat, Grand Forks
The American Medical Profession and the World War: The Call and the Results. The Surgeon-General's office will send representatives to this meeting, to discuss such subjects as "The Urgency of Additional Medical Men for War Service in the United States and Abroad," "Conditions at National Cantonments," "Trachoma in North Dakota and Its Relation to Drafted Men."

Dr. J. H. Oakley, U. S. P. H. S., will discuss the subject of Trachoma.

The Use of the Crude Hypochlorite Solution on the Plains of Dakota at the Time of Custer, and Its Use Today as Refined and Perfected by Dakin-Carrel.....Dr. John Taylor, Grand Forks
Moving Picture Exhibit of the Dakin-Carrel Technique. (Machine furnished and operated by Dr. E. W. Humphrey, Moorhead, Minn.)

PHYSICIAN WANTED

In a town of 2,000 in southern central Minnesota, with electric lights, waterworks, sewer, etc. Two doctors have entered the service. The practice of one and the equipment of the other are optional. This is a good opening and no hesitancy need be felt in regard to taking these practices. Address 138, care of this office.

OFFICE FOR RENT AND EQUIPMENT FOR SALE

The suite of rooms in the Masonic Temple, Minneapolis, formerly occupied by the late Lieut. J. P. Rosenwald, are for rent; and the furniture and equipment, including an up-to-date x-ray outfit, entire or in part, will be sold very cheaply. Address W. M. Walker, manager the Masonic Temple. Tel. Main 703.

POSITION WANTED

As anesthetist by a graduate nurse (R. N.) with nine years' experience in a large hospital. Best of references. Address 136 care of this office.

POSITION WANTED

A graduate registered nurse desires a position in a Minneapolis or St. Paul physician's office as a nurse. Satisfactory references given. Address 137 care of this office.

POSITION WANTED

An experienced nurse wants a position as an assistant superintendent of a small hospital or as a surgical nurse. Good references given. Address 133, care of this office.

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

[illegible]

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	1															
Altkin	1,719	1,633	1															
Akeley			1															
Appleton	1,184	1,221	2															
Belle Plaine	1,121	1,204	1	1														
Biwabik		1,690	4			1												
Bovey		1,377	0															
Browns Valley	721	1,058	1															
Buffalo	1,040	1,227	1															
Caledonia	1,175	1,372	0															
Cass Lake	546	1,011	3															
Chisholm		7,684	0	1		1									1	1		2
Coleraine		1,613	0															
Delano	967	1,031	1															
Farmington	733	1,024	1															
Fosston	864	1,055	0															
Frazee	1,000	1,645	0															
Grand Rapids	1,428	2,239	1															
Hibbing	2,481	8,832	10			3												2
Jackson	1,756	1,907	0															
Janesville	1,254	1,173	1															
Kenyon	1,202	1,237	1															
Lake Crystal	1,215	1,038	2			1												
Litchfield	2,280	2,333	0													1		
Long Prairie	1,385	1,250	2															
Madelia	1,272	1,273	6															
Milaca	1,204	1,102	0															
Mountain Lake	959	1,081	1															1
Nashwauk		2,080	0															
North Mankato	939	1,279	2		1													
North St. Paul	1,110	1,404	0															
Osakis	917	1,013	2			1												
Park Rapids	1,313	1,850	1		1	1												
Pelican Rapids	1,033	1,019	2															
Perham	1,182	1,376	1															
Pine City	993	1,258	0															1
Plainview	1,038	1,175	0															
Preston	1,278	1,193	3		1													
Princeton	1,319	1,555	0															
St. Louis Park	1,325	1,743	2	1														
Sandstone	1,189	1,818	4															
Sauk Rapids	1,331	1,745	1															
South Stillwater	1,422	1,343	0															
Springfield	1,511	1,482	1	1														
Spring Valley	1,770	1,817	3															
Wadena	1,520	1,820	3			1				1								
Wells	2,017	1,755	3															
West Minneapolis	2,250	3,022	0													1		
Wheaton	1,132	1,300	0															
White Bear Lake	1,288	1,505	2															
Windom	1,944	1,749	4															
Winnebago City	1,816	2,555	1															
Zumbrota	1,119	1,138	1															
STATE INSTITUTIONS			3	3														
Anoka, Asylum			0															
Faribault, School for Blind			0															
Faribault, School for Deaf			0															
Faribault, School for Feeble Minded			3			1												
Fergus Falls, Hospital for Insane			9	1														
Hastings, Asylum			4	2		1												
Minneapolis, Soldiers' Home			5															
Owatonna, School for Dependents			0															
Red Wing, State Training School			0															
Rochester, Hospital for Insane			12															
Sauk Centre, Home School for Girls			0															
St. Peter, Hospital for Insane			16	3		1												
St. Cloud, State Reformatory			0															
Stillwater, State Prison			1	1														
OTHER PARTS OF STATE			846	71	15	92	6	6	7	.....	7	.....	1	3	26	64	3	26
Total for state			2146	172	32	210	28	25	14	.....	31	.....	4	21	44	165	16	79

*No report received. REGISTRAR not doing his duty
154 stillbirths not included in above totals.

Why Oats

Hold Unique Place

They supply in food units 1810 calories per pound.

That's 90 per cent more than round steak—10 per cent more than wheat.

Served with milk they supply a perfectly balanced food, with all needed elements.

They are rich in minerals, particularly phosphorus and lecithin.

They supply the vitamins.

They usually include the bran.

They supply ideal food at a minimum cost. Quaker Oats cost 5 cents per 1000 calories.

Eggs cost 10 times as much.

Meats, on the average, 8 times as much.

Bread nearly twice as much.

Seven breakfasts of Quaker Oats can be served at the cost of one bacon-and-egg breakfast.

Quaker Oats

Queen Grains Only

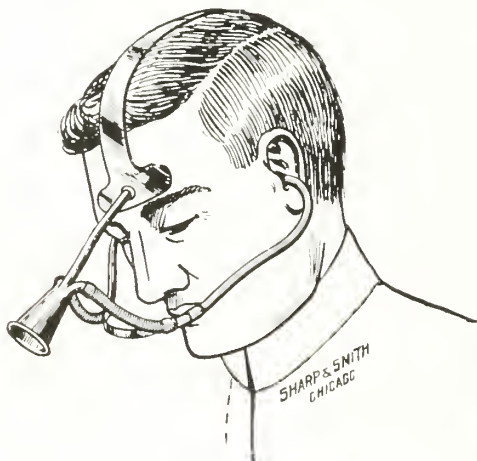
Quaker Oats is flaked from just the big, plump oats. We get but ten pounds from a bushel. On that account it stands supreme in flavor, as all the world has recognized. Yet it costs no extra price.

The Quaker Oats Company

Chicago

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones. After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

155-7 N. Michigan Blvd. - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aen aerobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or

Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.

5 S. Wabash Ave.

ST. LOUIS, MO.

4485 Olive St.—Corner Taylor

NEW YORK, N. Y.

18 E. 41st St.

PUBLISHER'S DEPARTMENT

A PRIVATE MATERNITY HOME

Mrs. Cora Morey conducts at 2014 Twenty-sixth Avenue South, Minneapolis, a maternity home for unfortunate women which is above criticism in all its work and methods. All her work is done under the supervision of reputable physicians and nurses, and the home has never, we believe, been criticised in the least by the city or state authorities. This is the highest commendation to be given a private maternity home, and of course one worthy of it is worthy of the patronage of medical men, who are expected to advise the unfortunate girls who seek advice from them.

LISTERINE

The Lambert Pharmacal Co., of St. Louis, Mo., have issued a twenty-four page pamphlet on "Acute Intestinal Infections of Children," which is mailed free to any physician upon request. It deals with the various infections common to children, and gives prescriptions for the various conditions presented by these infections. Listerine, of course, finds a place in these prescriptions, because its value in such place has been recognized by medical men for nearly forty years.

Listerine is compatible with practically all other medicinal agents commonly used in these conditions, and may always be safely used.

"KNUCKLEFIT GLOVES"

The surgical gloves of the Lincoln Rubber Company of Akron, Ohio, are the standard of surgical gloves around the world. They are known as the "seeing gloves" because they do not appreciably affect the touch of the surgical finger that is the surgeon's eye in the places that the finger alone can reach.

Besides the perfect fit of these gloves, they are tough and durable, thus making them cheap because of their wearing qualities, and safe because they are infection-proof.

They make friends wherever they are worn. Messrs. Noyes Bros. & Cutler are the Northwestern agents for these gloves.

WAR NEUROSES

Nervous collapse and allied disorders of the nervous system resulting from the strain occasioned by the Great War are very frequent. The rational treatment, as also the prevention, of these disorders, includes the building up of both the general and the nervous systems by the administration of Fellows' Syrup.

"It is a food for the nerves," wrote a physician in the British Isles, adding that in his hands, during ten years of almost daily use, Fellows' Syrup yielded results unattainable by the administration of other preparations of the hypophosphites.

There are many imitations, but only one Fellows' Syrup. It has stood the crucial test of years of clinical application in all parts of the world.

WALLMAN OPTICAL CO. (INC.)

Physicians, whether specialists or not, who use optical instruments of any kind, will find the Wallman Opti-

cal Co. of Minneapolis a wholly dependable concern to do business with, and may be sure that any order placed with the Company will be filled to the entire satisfaction of the one who places the order both as to the excellence of the work done, the promptness in filling the order, and the prices charged.

The Company has the respect and the good-will of the entire medical profession of Minneapolis and of all medical men who come into contact with them.

Prescription-blanks and catalogues are sent to all physicians requesting them. Address the Wallman Optical Co. (Inc.), P. & S. Building, Minneapolis.

THE OTTAWA TUBERCULOSIS COLONY

The above-named Colony and Dr. Pettit, its conductor, are known wherever the scientific treatment of tuberculosis has been studied. The elements of the successful treatment of tuberculosis are many, and failure at any one point in the management and care of the patient may render an otherwise perfect system almost useless. These things have been worked out and are carried into effect at the Ottawa Colony as in few other places, until Dr. Pettit's reputation has become established among medical authorities.

The terms of care and treatment at this Colony are not high, but are very moderate compared with the terms in institutions in other lines where the best is given.

Dr. Pettit's booklet on "What the Tuberculous Patient Should Know" is of great value to patients and to physicians. It is sent free upon request. For a copy address Dr. H. V. Pettit, Ottawa, Illinois.

DIAPER RASH

The irritated conditions which are so frequently observed around the genitals and buttocks of young infants are particularly amenable to the soothing action of K-Y Lubricating Jelly. Of course, the digestive organs of the little sufferer must be interrogated, its diet corrected if necessary, and proper care given to changing the diapers and cleansing the parts. If, in addition to attending to these matters, K-Y Lubricating Jelly is used after each bath and whenever the diapers are changed, the distressing rash and excoriations which are so often responsible for the fretting and restlessness of young infants, can be relieved and avoided in the majority of instances. K-Y Lubricating Jelly is absolutely harmless and has the great advantage that it never stains or soils the clothing or bed linen. It is emollient, detergent and healing.

For samples address Johnson & Johnson, Van Horn & Sawtell Dept., 15-17 East 40th St., New York City.

STERILIZING EQUIPMENT

There is ample excuse for a conservative attitude toward new medicines, methods, and equipment; but, after complete and repeated demonstrations in the hands of authorities, it is good judgment to accept the verdict, and make use of the things that are new.

In this classification the "National" High Pressure Sterilizer, made by the Northwestern Steel & Iron Works, Eau Claire, Wis., may properly be placed. Aside from its very reasonable cost and the fact that it does the same work as an autoclave, the feature which will appeal most to practitioners and hospitals is that the sterilizer will operate without steam connections. The

gasoline burner enables proper functioning in the most remote communities. For city and hospital use, either the gas burner or steam coil may be utilized, if desired, instead of the gasoline burner.

Approval and use by the U. S. Army and the Red Cross, as well as by many of the best-known sanitariums and hospitals in the country, stamp this sterilizer as a standard item of surgical equipment. Full information may be secured by addressing the manufacturers, or Noyes Bros. & Cutler, Minneapolis and St. Paul.

MUDBADEN SULPHUR SPRINGS

Under its present management this health resort is having an era of unusual prosperity. It endeavors to maintain the closest co-operation with the medical profession that patients sent by physicians may have just the right kind of treatment to obtain the best possible results.

The building, especially the interior, is attractive, and all the surroundings of the patients are such as to bring good cheer.

The sulphur mud bath is no longer a fad, but is a well-recognized therapeutic agent, often effecting remarkable cures, and rarely failing to give sufferers almost instant relief in forms of sickness that produce the most distressing pains, such as arthritis, neuralgia, neuritis, and like diseases.

While the postoffice of the institution is Jordan, the Northwestern railway has made "Mudbaden" a station on its line, and trains stop to let off or take on passengers almost at the front door of the resort.

Mr. A. L. Johnson is the manager and Dr. Frank W. Mackoy is the medical director of the institution, and they invite medical men to visit the institution or to make the most minute inquiries concerning their work.

WELDING THE LINKS IN THE CHAIN OF DIGESTION

The above caption is the title of a brief pamphlet, illustrated, just issued by Messrs. Reed & Carnrick, whose investigations and discoveries in digestants are known to all medical men, and whose reliability has never been questioned.

The colored illustrations, together with the text, deal particularly with "meteorism," "ascites," "enteroptosis," and the extreme emaciation of wasting disease, exhibited in the scaphoid abdomen, which is also illustrated. Another illustration shows the peristaltic movements of the stomach in outward appearance.

The therapy of the digestive disorders is clearly set forth, and the aid that Peptenzyme gives the digestive processes is modestly explained.

Every general practitioner and almost all specialists are prescribing daily for patients suffering with digestive disorders; and helpful digestants enter into almost all prescriptions. It is worth while to know what Nature points out to be the right digestant, as is unmistakably shown by a study of the natural processes of digestion in the human alimentary tract. A skip at one point in the process is like a "skip" in the gasoline engine, and dire results follow the unneglected evidence of trouble in either the human stomach or the gas motor.

Messrs. Reed & Carnrick are sending this interesting pamphlet to all physicians, and it should be carefully read by *all* of them.

BIOLOGICAL SERVICE

The importance of proper storage conditions for biological products is well known. In sections of the country where there is a limited demand for biological items, the problem of securing potent products has had a deterring influence on the use of indicated vaccines or serums. Not infrequently the use of improperly stored or out-dated biologicals has resulted in a condemnation of the manufacturer's label and a mental resolve not to specify any more of that particular maker's product.

The complete distribution of Lilly Biologicals through wholesale depots enables the retail drug trade to keep a minimum stock of Lilly Biological Products and to replenish that stock frequently by making use of the service facilities offered by the wholesalers, who carry the complete Lilly line in refrigerator storage. In specifying Lilly Biologicals, therefore, the physician has every assurance that, whatever his needs, there is reason to believe that the particular product he desires will reach him in the best condition.

It is the idea of quality, service, and satisfaction, so long associated with this well-known manufacturer's label, that has brought its biological line to the fore and resulted in constantly increasing specifications for biologicals bearing the Red Lilly mark.

The season of typhoid and paratyphoid fevers is at hand; physicians will be administering this vaccine extensively. The attention of our readers is called to the excellence of the Lilly Products, their availability and potency and to the fact that Typhoid Mixed Vaccine is to be preferred ordinarily, because of the immunity it confers against the paratyphoid, as well as the typhoid, infection.

THE JOURNAL-~~L~~ANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, JULY 1, 1918

No. 13

TRANSACTIONS OF THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION—THIRTY-SEVENTH ANNUAL MEETING, 1918

OFFICERS AND COMMITTEES

PRESIDENT

D. L. SCANLON, M. D.....Volga

FIRST VICE-PRESIDENT

HARRY T. KENNEY, M. D.....Pierre

SECOND VICE-PRESIDENT

G. S. ADAMS, M. D.....Yankton

SECRETARY-TREASURER

ROBERT D. ALWAY, M. D.....Aberdeen

**COUNCILOR—FIRST DISTRICT, AND PRESIDENT
OF THE COUNCIL**

WILLIAM EDWARDS, M. D.....Bowdle

COUNCILOR—SECOND DISTRICT

C. S. O'TOOLE, M. D.....Watertown

COUNCILOR—THIRD DISTRICT

N. K. HOPKINS, M. D.....Arlington

COUNCILOR—FOURTH DISTRICT

T. F. RIGGS, M. D.....Pierre

COUNCILOR—FIFTH DISTRICT

L. N. GROSVENOR, M. D.....Huron

COUNCILOR—SIXTH DISTRICT

FREDERICK TREON, M. D.....Chamberlain

COUNCILOR—SEVENTH DISTRICT

G. G. COTTAM, M. D.....Sioux Falls

**COUNCILOR—EIGHTH DISTRICT, AND SECRETARY
OF THE COUNCIL**

JAMES ROANE, M. D.....Yankton

COUNCILOR—NINTH DISTRICT

F. E. CLOUGH, M. D.....Lead

COUNCILOR—TENTH DISTRICT

H. R. KENASTON, M. D.....Bonesteel

**MEMBER OF HOUSE OF DELEGATES, AMERICAN
MEDICAL ASSOCIATION**

H. J. G. KOOBS, M. D.....Scotland

ALTERNATE

J. F. D. COOK, M. D.....Langford

Proceedings of the House of Delegates

FIRST SESSION—MAY 21

The House of Delegates met at the Elks' Hall, Mitchell, May 21, 1918, at 3 p. m.

On roll-call the following responded: Dr. H. J. G. Koobs, Scotland, President; Dr. P. D. Peabody, Webster; Dr. J. D. Cook, Langford; Dr. W. J. Benner, Willow Lake (alternate); Dr. Frederick Treon, Chamberlain; Dr. G. G. Cottam, Sioux Falls; and Dr. R. D. Alway, Aberdeen, Secretary.

A communication from the Secretary of the American Medical Association for Medical Reserve Corps was read, and upon motion the following Committee was appointed: Lieut. Dr. F. A. Spafford, Flandreau, Chairman; Dr. R. D. Alway, Aberdeen, Secretary; Dr. J. W. Freeman, Lead; Dr. E. O. Giere, Watertown; Dr. H. J. G. Koobs, Scotland; Dr. D. L. Scanlon, Volga; Dr. D. A. Bobb, Mitchell; and Dr. Park B. Jenkins, Waubay.

A communication from the Council of American Medical Association on Medical Education requesting the Association to appoint a committee to determine what hospitals in the state are qualified to furnish satisfactory internships was read. Moved by Dr. Peabody and seconded that the President appoint a committee of five to carry out this work. The following committee was appointed: Dr. C. E. McCauley, Aberdeen; Dr. S. M. Hohf, Yankton; Dr. F. A. Spafford, Flan-

dreau; Dr. F. E. Clough, Lead; and Dr. G. G. Cottam, Sioux Falls.

The following report by Dr. Cottam, chairman of the Medical Defense Committee, was made:

REPORT OF THE COMMITTEE ON MEDICAL DEFENSE

As a basis for this report, questionnaires were sent to the secretaries of forty-eight state medical associations. Replies were received from forty; no replies coming from California, Delaware, Florida, Kansas, Maine, Mississippi, New York, and Oklahoma. Of the forty who replied, twenty-four stated that the association they represented operated a medical defense plan, and one (Colorado) in which a medical defense plan had been passed by referendum, but not yet adopted, leaving fifteen states without any form of state medical association defense.

The questionnaires were sent out covering the following points: Number of active members in the association; whether or not medical defense is undertaken, and, if so, how financed; what arrangement is made with permanent counsel, with local attorneys; payment of costs or judgments or both; varieties of malpractice covered; success or otherwise of the plan; length of time in operation; and whether the number of cases was decreasing, increasing, or stationary. Many of the state secretaries were kind enough to send literature relative to the matter published by their organizations, and not a few went to the trouble of writing detailed letters.

An examination of the replies received from the twenty-four state secretaries whose organizations are maintaining a medical defense system reveals the interesting fact that in one only is there a tendency to discard it. The State Medical Association of Wisconsin has appointed a committee to investigate and report at the next meeting on the advisability of dropping the insurance feature. This association has won practically all its cases, but it has been subjected to some criticism for having defended some persons who were in the wrong.

None of the state associations pay judgments. The special dues for medical defense vary from 21c per capita, in Massachusetts, in 1917, to \$5 per capita per year, in Arizona. The Massachusetts Association has a membership of 3,600, while Arizona has only 200.

We have consolidated the answers to the various questions, giving the same by number corresponding to the numbers of the questions asked, which were specifically as follows: 1. Number of Active Members. 2. Medical Defense. 3. How Financed. 4. Arrangement with Counsel. 5. Arrangement with Local Attorneys. 6. Disposition of Judgments and Costs. 7. Varieties of Malpractice Suits Covered. 8. Is Plan Successful? 9. How Long in Operation? 10. Status of Malpractice Cases. 11. Remarks. 12. Enclosures.

Alabama—

1. About 1,850 members. 2. No defense. 10. There have been only 12 malpractice suits in the history of the state.

Arizona—

1. About 200 members. 2. Has defense. 3. \$5 per capita from regular dues. 4. Annual retainer, \$100 for advice, etc. Pay for actual services. 5. Member allowed voice in selection of local attorney when em-

ployed. 6. Pay costs only. 7. Defend all suits. 8. Plan is successful. 9. In operation 3 years. 10. Had 3 suits in 1917; only experience.

Arkansas—

1. 1,100 members. 2. No defense.

California—

No reply to questionnaire.

Colorado—

1. 856 members. 2. Defense passed by referendum vote, but not yet adopted.

Connecticut—

1. About 1,100 members. 2. No defense.

Delaware—

No reply to questionnaire.

District of Columbia—

1. 570 members. 2. No defense.

Florida—

No reply to questionnaire.

Georgia—

1. 1,500 members. 2. Has defense. 3. From regular dues. 4. Pay retainer for advice only. Regular compensation for actual services. 5. Member allowed voice in selection of local attorney when employed. Paid by society. 6. No. 7. Defend only civil suits. 8. Plan is a success. 9. In operation 2 years. 10. Number of cases stationary.

Idaho—

1. 127 members. 2. No defense.

Illinois—

1. 6,300 active members. 2. Has defense. 3. \$1 per capita. 4. Retainer for advice only. Trial fees and expenses. 5. Pay local attorney. Member consulted in his selection. 6. No. 7. Defend all suits. 8. Plan is successful. 9. In operation 14 years. 10. Cases vary in number. 11. Dues must be increased.

Indiana—

1. 2,669 members. 2. Yes. 3. 75 cents per capita. 4. \$360 retainer; \$25 a day in court. 5. Pay local attorney. Consult member in his selection. 6. No. 7. Defend no criminal suits. 8. Plan is successful. 9. In operation 6 years. 10. Cases apparently decreasing. 12. By-laws and blanks sent.

Iowa—

1. 2,550 members. 2. Has defense. 3. \$3 per capita. 4. Pay small retainer, and \$50 per diem for actual service. Entire charge of case, and assist in settlement where defense cannot be consistently undertaken. 5. Selected by advice of regular counsel. 6. Cost of appeal only. 7. Defend all cases. 8. Plan is successful. 9. In operation 9 years. 10. Slight decrease in number of cases this year. Varies from year to year. 10. Have had trouble with local attorney because doctor selects a friend at Society's expense, and hires him without consulting our committee. Have refused to pay some of their claims.

Kansas—

No reply to questionnaire.

Kentucky—

1. 2,500 members. 2. Has defense. 3. \$1.00 per capita. 4. \$300 annual retainer. Consults party sued, and engages district counsel. 5. Pay local attorney. Member consulted in his selection. 6. Pay costs only. 7.

Defend all suits. 8. Plan is successful. 9. In operation since organization of Association. 10. Suits decreasing.

Louisiana—

1. 1,000 members. 2. Has defense. 3. 50 cents per capita. 4. Pay for each case separately. 5. Pay local attorney. Selected by committee. 6. Pay costs only. 7. Defend all suits. 8. Plan is successful. 9. In operation 4 years. 10. Number of cases decreasing. 12. Constitution and by-laws.

Maine—

No reply to questionnaire.

Maryland—

1. 1,087 members. 2. Has defense. 3. Dues raised to \$10 to cover defense. 4. Annual retainer of \$100, \$25 for investigating and preparing case, \$25 per diem in court and traveling expenses. Pay for transcriptions and printing. 5. Pay local attorney. Member not consulted. 6. No. 7. Defend all cases. 8. Plan is successful. 9. In operation 12 years. 10. Number of cases is decreasing. 11. Have won nearly every case. A small number have been settled out of court. 12. Constitution and by-laws sent.

Massachusetts—

1. 3,600 members. 2. Has defense. 3. Regular dues; about 21 cents per capita in 1917. 4. No answer. 5. Local attorney selected by counsel and paid by him. 7. Defend all malpractice suits according to Murray's Oxford Dictionary definition of malpractice suits. 8. Plan is successful. 9. In operation 10 years. 10. Number of cases has increased during past 5 years. 11. Attorneys think more threatened suits and more suits brought, because of Workmen's Compensation Act. 12. Reprint "First 7 Years of Malpractice Defense" sent. New Proceedings of Council for October, November and December, 1913-14.

Michigan—

1. 2,000 members. 2. Has defense. 3. \$1.00 per capita. 4. Annual retainer, \$750; \$50 per diem in court. Defends all cases in court. 5. Pay local attorney. Member consulted in selection. 6. Pay costs. 7. Defend all suits. 8. Plan very successful. 9. In operation 8 years. 10. Number of cases stationary. Increase in number of trials. 11. Plan is retroactive. Defend every member who pays dues before April 1, regardless of when cause of action arose, except where suit was brought or threatened prior to his becoming a member of the Society.

Minnesota—

1. 1,600 members. 2. Has defense. 3. From regular dues. 4. Pay counsel \$50 per diem in court and expenses. 5. No local attorney employed. 6. Pay cost of defending case only. 7. Defend all defensible malpractice suits. 8. Plan is successful. 9. Plan in operation since 1910. 10. Number of cases about stationary last two or three years. 11. Think defense has added to membership. Some objection because judgments are not paid. Legally held that payment of judgments would bring Association under insurance department of state. For this reason cannot have special insurance fund, but must pay all expenses from general fund.

Mississippi—

No reply to questionnaire.

Missouri—

1. 3,200 members. 2. Has defense. 3. Regular dues. No arrangement with counsel. 5. Pay local attorney to extent of \$100. Member allowed voice in selection. 6. No. 7. Defend civil suits. 8. Plan is successful. 9. In operation 9 years. 10. Number of cases increasing. 11. Defense is one of the most powerful influences for protection of members, and for holding allegiance to the organization. It is not so much the amount involved, but all respond promptly to the defense of the one attacked. Ninety-five per cent of the cases are without just grounds. Physician attacked is much more likely to resist if backed up by the Society.

Montana—

1. About 325 members. 2. No defense.

Nebraska—

1. 1,138 members. 2. Has defense. 3. Part of dues, \$1.00 per capita. 4. Pay for services preliminary to trial, or whoever is chosen agreeable to the Society and the defendant. 5. Pay local attorney if chosen. Member selects if agreeable to all concerned. 6. No. 7. Defend civil suits. 8. Plan is very successful. 9. In operation over 12 years.

Nevada—

1. 89 members. 2. No defense.

New Hampshire—

1. 500 members. 2. No defense. 10. Number of cases stationary.

New Jersey—

1. 1,750 members. 2. Has defense. 3. Dues, \$2.00 assessment and \$1.00 J. A. M. A. carried defense with it. 4. Pay counsel \$250 for each suit, and additional fee if case is appealed to higher court. 5. Local attorneys not employed. 6. No. 7. Councilors determine what cases shall be defended. 8. Plan is successful. 9. In operation 6 years. 10. Number of cases is decreasing. 11. Some county societies contract with an insurance company at reduced rates to insure their members.

New Mexico—

1. 225 members. 2. No defense. 10. Number of cases decreasing. 11. Courts are more careful as they find the Society will not defend guilty members or blackmail. The public are increasingly finding the Society ready to fight for an innocent member, and realize that it is money wasted in attempting blackmail. A member appearing against a fellow-member is expelled from the Society.

New York—

No reply to questionnaire.

North Carolina—

1. 1,300 members. 2. No defense.

North Dakota—

1. 404 members. 2. Has defense. 3. Costs from regular dues as may be needed. 4. Annual retainer, \$500; and \$50 per diem for actual services and all expenses. 5. Local attorney is sometimes engaged, and paid \$50 a day. 6. Pay only costs of suit. 7. Defend all suits except those growing out of abortions. 8. Plan is a success. 9. In operation 6 years. 10. No increase in number of suits. Many started are dropped. 11. I recall only two cases decided against physicians, and in both instances the verdicts were just. 12. Pamphlet on "Medical Defense" enclosed.

Ohio—

1. 4,500 members. 2. Has defense. 3. From annual dues, \$1.00 per capita. 4. Each case is paid for separately. 5. Local attorney selected by general counsel, and paid by Society. 6. Pay costs only. 7. Defend only civil cases. 8. Plan is successful. 9. In operation 2 years. 10. Cannot say as to status of suits. Had 19 cases in past year and a half. 11. Medical Defense is a good means of facilitating collection of membership dues, which must be paid in advance. 12. Pamphlet, "Plan of Medical Defense," and blanks enclosed.

Oklahoma—

No reply to questionnaire.

Oregon—

1. 530 members. 2. Has defense. 3. About \$3 per capita from annual dues. 4. No retainer. General advice free. Pay for services rendered in each case. 5. Council decides as to employment of local attorney. 6, 7, 8. No suits have been started since defense plan was adopted. 9. In operation 1 year.

Pennsylvania—

1. 7,000 members. 2. Has defense. 3. In 1917, 75 cents per capita from annual dues set aside as separate fund for defense. First five years, 10 cents per capita; gradually raised to present amount. 4. Annual retainer, \$100, covers office work and advice. This is taken from the general fund, not from the defense fund. General attorney represents Society in the U. S. Courts and in his county; has general supervision of local attorneys in each case. Endeavor to secure best lawyer in each county. 5. Counsel determines whether local attorney shall be employed. 6. Pay legal expenses only. 7. Defend only civil cases. 8. Plan is successful. 9. In operation 11 years. 10. Number of suits brought is stationary. 11. The Councilors look into cases early and carefully to avoid trial, and, if cases are tried, to do all that is possible for the physician. No member in good standing has yet been refused defense by the Society. Have never lost a case where member lived up to the rules, and consulted his Councilor promptly. 12. Pamphlet and blanks sent.

Rhode Island—

1. 425 members. 2. No defense.

South Carolina—

1. 750 members. 2. No defense. 10. Slight increase in number of suits brought; not over 12 in fifty years.

Tennessee—

1. 1,619 members. 2. Has defense. 3. Assessment, \$1.00. 4. Annual retainer, \$300. Defend all suits in their county; engage local counsel, and act as general legal advisor. 5. Pay local attorney. Member allowed choice in selection. 6. No. 8. Plan is successful. 9. In operation 3 years.

Texas—

1. 3,601 members. 2. Has defense. 3. From regular dues, \$1.00 per capita. 4. Annual retainer, \$300. Each case paid for separately. General counsel makes arrangements with local counsel and supervises each case. 5. Member selects local attorney on approval of general counsel. Society pays local attorney. 6. Costs only. 7. Defend civil cases, and committee uses its judgment as to criminal cases. 8. Plan is a success. 9. In operation 4 years. 10. Number of cases probably decreasing. 11. Have not yet lost a case, and have prevented many

suits. Physicians work more harmoniously under the defense plan. Suits are often based upon careless remarks of a second physician, perhaps a consultant.

Utah—

1. 258 members. 2. No defense.

Vermont—

1. 390 members. 2. Has defense. 3. From annual dues, \$3.00 per capita. 4. Annual retainer, \$50, and compensation for each case. 5. Pay local attorney, who must be acceptable to the general counsel. 6. Pay costs. 7. Defend civil cases only. 8. Plan is a success. 9. In operation 7 years. 10. Number of suits has decreased since defense adopted. 14. Would emphasize the fact that the physician is protected from blackmail, but that he is not protected from paying damages if guilty. Nine-tenths of the malpractice cases are due to professional jealousy, which must be done away with. A lawyer with liberal views is essential.

Virginia—

1. About 1,800. 2. No defense. 11. Only 2 suits have been brought in the state in thirty-five years.

Washington—

1. 865 members. 2. Has defense. 3. Voluntary subscriptions. 4. Employ several firms of attorneys, and pay by the case. 6. Pay costs only. 7. Defend all cases. 8. Plan is a success. 9. In operation 5 years. 10. Number of cases is decreasing. 11. The defense was organized because suits were increasing in frequency. Some insurance companies raised their rates, and others withdrew from the field. Have caused 25 per cent reduction in the number of cases, and have handled 127 cases without financial loss to members defended. Defense fee is materially higher than in other states because of local conditions.

West Virginia—

1. 950 members. 2. Has defense. 3. From regular dues. Optional for member to take defense. 4. No arrangement with attorneys. 5. Pay local attorney. Member given voice in his selection. 6. Pay costs deemed advisable by committee. 7. Defend all suits except those violating the law and the ethics of the A. M. A. 8. Plan has been a success so far. 9. In operation 7 years. 10. Slight increase in the number of cases. 12. At first the defense feature was compulsory; later it was made optional. Nearly all members use the protection. Better to retain the best counsel for each case than to retain one firm.

Wisconsin—

1. 1,850 members. 2. Has defense. 3. Regular dues, \$2.00 per capita. 4. Fee basis. 5. All cases under direction of general counsel. Local attorneys co-operate. 6. Pay costs only. 7. Defend all suits. 8. Plan is a success in the matter of winning cases. 9. In operation 10 years. 10. Number of suits brought is stationary. 11. Some criticism against having defended members who were in the wrong. Committee has been appointed to investigate and report at the next meeting as to the advisability of dropping insurance. Have won practically all cases.

The Committee also communicated with the United States Fidelity and Guaranty Company of Baltimore, the Maryland Casualty Company, Baltimore, and the Physicians' Protective Association of Fort Wayne, Indiana, with a view to securing their estimates of under-

writing our membership. Their respective replies follow:

"MARYLAND CASUALTY COMPANY.

"Baltimore, Md., April 1, 1918.

"Messrs. McKinney and Allen,

"Sioux Falls, S. D.

"Gentlemen:

"We are in receipt of your letter of March the 27th regarding insurance for members of the South Dakota Medical Association, for physicians' liability or defense insurance.

"Our experience on both of these classes has been such that we have consistently refused to make any reduction in the rate, although in certain states the United States Fidelity and Guaranty Company and the Aetna are making lower rates for practically the same coverage as we write. As a matter of fact, it was only last week that Mr. Burns sent out a circular letter to the agents in nineteen different states withdrawing from the writing of this class of business either on account of our experience in those states or owing to the small amount of business done. Several years ago the Company also withdrew from the writing of this class in about half a dozen other states, so at present we are only accepting this line for about half of the states in the United States. Feeling this way we naturally hesitate about making any reduction in South Dakota, but in view of the volume we can secure if we insure all of these 400 members we are willing to meet the United States Fidelity and Guaranty Company's rate of \$7.50 for physicians' defense, or \$15.00 for physicians' liability, limits five and fifteen thousand for each doctor, provided we can secure insurance on all of the 400 odd members of the South Dakota Medical Association. Understand, this quotation does not apply if we are only to secure a portion of the members. Of course, some of these members will have insurance in force at the present time, and it may be that they cannot conveniently arrange to cancel their existing contracts without a loss to them. In instances of this kind we are willing to let their policies remain outstanding until expiration, but at such time the general policy is to be endorsed to show these different members. We judge that instances of this kind will be in the small minority, as by far the greatest number of physicians in South Dakota are not carrying insurance.

"Yours truly,

"(Signed) W. W. GUEST, Underwriter."

"UNITED STATES FIDELITY & GUARANTY COMPANY.

"Baltimore, Md., March 19, 1918.

"Dr. Gilbert Geoffrey Cottam,

"Sioux Falls, S. D.

"Dear Doctor:

"In reply to your letter of the 12th inst., I submit the following rates:

"For full coverage, that is to say, defense and indemnity, in the amounts of \$5,000 to \$15,000 per individual, the annual per capita premium charge will be as follows:

"\$15.00 contingent upon insuring from 300 to 400 members.

"\$17.50 contingent upon insuring from 200 to 300 members.

"\$18.50 contingent upon insuring from 100 to 200 members.

"For defense only, no liability in event of judgment, the following per capita annual rate will apply:

"\$7.50 contingent upon insuring from 300 to 400 members.

"\$8.50 contingent upon insuring from 200 to 300 members.

"\$10.00 contingent upon insuring from 100 to 200 members.

"Permit me to add that the individual rate now obtaining is \$25.00 per annum for defense and indemnity, and we have not been writing defense only policies on individual basis. Thus, you will observe that the figures quoted above are a very substantial reduction.

"Yours very truly,

"(Signed) W. B. HILL,

"Supt. Accident and Health Department."

The Physicians' Protective Company of Fort Wayne, Indiana, declined to make any proposition, on the theory that such an arrangement would be even more prejudicial to winning the case than is true under existing circumstances.

With all this information at hand to guide us, what then shall we do about this important matter? There is no denying the ever-present danger of malpractice litigation, especially pressing since the passage of the employers' liability laws have taken away the business of the ambulance-chasing-personal-injury-suit lawyer, and compelled him to seek new pastures. What shall we do about it? Shall we continue to carry policies with defense corporations or shall our state society undertake to carry the load? Would this be a proper time for us to undertake it with 14 per cent of our physicians in the service and more going, and those who remain already burdened with added responsibilities? For it is an indisputable fact that a considerable share of the success of an enterprise like this depends upon the fidelity and competency of a permanent committee on medical defense which investigates each case, decides on its merits, and, if proper for defense, helps to carry it through to successful fruition. This means the expenditure of much time and ability on the part of competent men. At this time, with the world at war and this country involved, it is the belief of your committee that for the present no independent plan of defense should be undertaken by the Association.

We recommend that if anything be done in the way of securing defense for our members, it be through a permanently established concern handling insurance of this character, thereby securing lower rates and high-grade service. Such an arrangement need not be permanent, but could be terminated at the end of any policy year, should the Association decide to adopt a plan of its own or to discontinue furnishing protection for its members. Should, however, the House of Delegates decide that it is expedient for this Association to handle its own defense at this time, then we would recommend the appointment of a standing committee on medical defense composed of three members, to which committee would be referred all cases of threatened litigation for civil malpractice against members of the Association. The committee would act, first, as a sifting committee to determine the proper status of a case and whether or not it came within the scope of the association's defense plan. It would be the committee's duty to make proper arrangement for counsel and to help with the preparation of a proper defense. The serv-

ices of a competent lawyer or permanent retainer should be secured, to have general charge of the defense of all cases and for advice in cases which did not come to trial.

As to the cost under this plan, it will be noted on referring to the table of replies from the various state associations that the societies with the largest membership have the smallest per capita expense and that only three associations as small or smaller than this are undertaking medical defense. These are Arizona with 200 members, North Dakota with 404, and Vermont with 390. The first levies a special per capita assessment of \$5 per annum, the second "as much as may be needed each year," amount not stated, while the last levies \$2 per year on each member. It is fair to assume that we would need to levy a special assessment of at least \$2 per annum. This would create a fund to pay the actual expenses of litigation and maintaining records, the committee serving gratuitously. The annual retainer fee varies from \$50, in Vermont, to \$750, in Michigan, and the average per diem for services in court is \$50. Court costs very seldom have to be paid, as most of these claims, being without merit and conceived in a spirit of blackmail, are rarely successful in accomplishing their purpose if a proper defense is made. Whatever is done by this Association, we must always remember that it is our highest professional obligation never under any circumstances to compromise a case of this character. We must fight, fight hard, and fight to the end.

Respectfully submitted,

G. G. COTTAM, *Chairman*,

F. A. STAFFORD,

H. T. KENNEY,

(In service; unable to act.)

Committee on Medical Defense.

Moved by Dr. Alway that action be deferred until after the report was presented to the general session.

The President appointed the following Committee on Nominations: Dr. J. F. D. Cook, Chairman, Aberdeen District; Dr. C. S. O'Toole, Watertown District; Dr. N. K. Hopkins, Lake Preston District; Dr. A. H. Youngs, Pierre District; Dr. Fred. Treon, Mitchell District; Dr. G. G. Cottam, Sioux Falls District; Dr. James Roane, Yankton District; Dr. F. E. Clough, Black Hills District; and Dr. H. R. Kenaston, Rosebud District.

Meeting adjourned at the call of the President.

SECOND SESSION WEDNESDAY

Adjourned meeting of the House of Delegates called to order by the President at 6 p. m.

On roll-call the following responded: Dr. H. J. G. Koobs, Scotland, President; Dr. P. D. Peabody, Webster; Dr. J. F. D. Cook, Langford; Dr. C. S. O'Toole, Watertown; Dr. F. V. Willhite, Yankton, Alternate; Dr. H. Klima, Tyndall; Dr. F. E. Clough, Lead; Dr. F. A. Bryant, Herrick; Dr. A. H. Youngs, Pierre, Alternate; Dr. G. G.

Cottam, Sioux Falls; Dr. James Roane, Yankton; Dr. H. R. Kenaston, Bonesteel; and Dr. R. D. Alway, Aberdeen.

Dr. R. E. Farr, Minneapolis, appeared on behalf of *Minnesota Medicine* with a proposal to make that journal the official organ of the South Dakota State Association. After considerable discussion it was moved by Dr. Roane, and carried, that the matter be deferred for one year, and that a committee consisting of Drs. Koobs, Cottam, and Alway be appointed to go into the subject and report at the next annual meeting.

Moved by Dr. Alway, and carried, that a committee be appointed to draw a resolution to be sent to the Governor requesting a change in the vital statistics law. The President appointed Dr. F. V. Willhite, Dr. N. J. Nessa, and Dr. F. E. Clough.

The following amendment to the By-Laws was read, to be known as Sec. 13, and was laid on the table for one day.

The following amendment to the By-Laws of the South Dakota State Medical Association is offered to the House of Delegates in regular session assembled this 22d day of May, 1918, to-wit:

At the regular annual meeting of each District Society at which the election of officers takes place, a number of physicians resident in the state of South Dakota shall be chosen as being desirable candidates for appointment to the State Board of Health and Medical Examiners. Said choice shall be made by vote in the same manner as officers of that district society are elected. The number of such candidates selected by a district shall be equal to the number of delegates from that district to the State Association, viz.: one for each 25 members or major portion thereof, provided that each district shall be entitled to select at least one candidate. The names of these candidates so chosen shall be reported by the secretary of each district to the secretary of the State Association, who will compile a list of such names from all the District Societies of the State, and forward it to the Governor of South Dakota as soon as possible after January 1, with the request that appointments be made to the Board of Health and Medical Examiners during that year be made from such list. This procedure to be repeated each year. The secretary of the South Dakota State Medical Association shall also cause such list to be published with the Association proceedings.

This amendment should form Section 13 of Chapter 9 of the By-laws of the South Dakota State Medical Association.

Motion made by Dr. P. D. Peabody that as the members of the Association in general session are unanimous in their opinion that the Association should establish a defense department: "Be it resolved, that the Secretary enter into a contract with the Fidelity Guaranty Company of

Maryland, as per their terms made to the chairman of the Committee, provided one hundred applications can be secured.

The motion prevailed.

Moved by Dr. Peabody, and carried, that the State Board of Health be requested to carry on an "infant-welfare" campaign.

House adjourned to meet at the call of the President.

THIRD SESSION—THURSDAY, MAY 23

The House of Delegates was called to order on Thursday at 3 p. m.

On roll-call the following responded: Dr. H. J. G. Koobs, Scotland, President; Dr. J. D. Cook, Langford; Dr. F. V. Willhite, Yankton; Dr. G. G. Cottam, Sioux Falls; and Dr. R. D. Alway, Aberdeen.

Dr. Cook presented the following report of Nominating Committee, and moved its adoption, and the motion was carried:

For President, Dr. D. L. Scanlon, Dr. G. G. Cottam, and Dr. James Roane.

For First Vice-President, Major H. T. Kenney, M. R. C.

For Second Vice-President, Dr. G. S. Adams.

For Councilors: 2d District, Dr. C. S. O'Toole, two years; 4th District, Dr. T. F. Riggs, one year; 3d District, Dr. N. K. Hopkins, three years; 5th District, Dr. L. N. Grovesnor, three years; 6th District, Dr. Frederick Treon, three years; 9th District, Dr. F. E. Clough, three years.

For Delegate to the A. M. A., 1919-1920, Dr. H. J. G. Koobs.

For Alternate, Dr. J. F. D. Cook.

For place of meeting for 1919, Watertown.

(Signed)

DR. J. F. D. COOK,	DR. G. G. COTTAM,
DR. C. S. O'TOOLE,	DR. JAMES ROANE,
DR. A. H. YOUNGS,	DR. F. E. CLOUGH,
DR. F. TREON,	DR. H. R. KENASTON.

Drs. Cottam and Roane having withdrawn their names, motion was made by Dr. Cottam, and carried, that the Secretary be instructed to cast the ballot of the Association for Dr. Scanlon for President; for Dr. H. T. Kenney for First Vice-President; and for Dr. G. S. Adams for Second Vice-President. The Secretary so voted, and the President declared them elected.

The following were elected Councilors: 2d District, Dr. C. S. O'Toole, two years; 3d District, Dr. N. K. Hopkins, three years; 4th District, Dr. T. F. Riggs, one year; 5th District, Dr. L. N. Grovesnor, three years; 6th District, Dr. Frederick Treon, three years; 9th District, Dr. F. E. Clough, three years.

Dr. H. J. G. Koobs was elected delegate to the

A. M. A. and Dr. J. D. Cook, Alternate, for 1919 and 1920.

The place chosen for the next meeting was Watertown.

Moved by Dr. Cottam, and seconded by Dr. Willhite, that the amendment to the By-Laws to be known as Section 13 be adopted. Carried.

The following minutes of the meeting of the Board of Councilors were read and approved.

House adjourned sine die.

PROCEEDINGS OF THE BOARD OF COUNCILORS

FIRST SESSION—MAY 21, 5:30 P. M.

On roll-call the following answered: President, Dr. H. J. G. Koobs; Dr. Frederick Treon; Dr. G. G. Cottam; Dr. O. E. Giere, Alternate; Dr. J. W. Freeman, Alternate; and Dr. R. D. Alway, Secretary.

The following financial report was presented by the Secretary-Treasurer:

FINANCIAL REPORT OF THE SECRETARY-TREASURER

Receipts

Balance on hand May 28, 1917.	\$1,194.30
May 30, 1917, per capita dues, District No. 9.	3.00
June 15, 1917, per capita dues, District No. 2.	3.00
June 23, 1917, per capita dues, District No. 4.	3.00
June 23, 1917, per capita dues, District No. 1.	3.00
June 28, 1917, per capita dues, District No. 1.	3.00
Aug. 5, 1917, per capita dues, District No. 6.	3.00
Aug. 17, 1917, per capita dues, District No. 7.	3.00
Aug. 22, 1917, per capita dues, District No. 1.	21.00
Aug. 25, 1917, per capita dues, District No. 9.	3.00
Sept. 4, 1917, per capita dues, District No. 7.	3.00
Feb. 23, 1918, per capita dues, District No. 4.	15.00
Mar. 20, 1918, per capita dues, District No. 4.	3.00
Mar. 30, 1918, per capita dues, District No. 2.	108.00
April 2, 1918, per capita dues, District No. 10.	33.00
April 4, 1918, per capita dues, District No. 9.	57.00
April 4, 1918, per capita dues, District No. 3.	78.00
April 5, 1918, per capita dues, District No. 7.	117.00
April 11, 1918, per capita dues, District No. 8.	156.00
April 24, 1918, per capita dues, District No. 6.	78.00
May 1, 1918, per capita dues, District No. 3.	12.00
May 5, 1918, per capita dues, District No. 7.	36.00
May 11, 1918, per capita dues, District No. 2.	3.00
May 13, 1918, per capita dues, District No. 1.	228.00
May 15, 1918, per capita dues, District No. 9.	3.00
May 17, 1918, per capita dues, District No. 6.	6.00
Total	\$2,175.30

Disbursements

May 30, 1917, Warrant No. 16.	\$15.00
May 30, 1917, Warrant No. 17.	150.00
May 30, 1917, Warrant No. 18.	72.13
May 30, 1917, Warrant No. 19.	3.30
May 30, 1917, Warrant No. 20.	25.00
May 30, 1917, Warrant No. 21.	15.00

May 30, 1917, Warrant No. 22.....	50.00
May 30, 1917, Warrant No. 23.....	40.00
June 30, 1917, Warrant No. 1.....	5.00
July 3, 1917, Warrant No. 2.....	76.39
July 8, 1917, Warrant No. 3.....	7.50
July 24, 1917, Warrant No. 4.....	165.84
Dec. 27, 1917, Warrant No. 5.....	183.74
Feb. 9, 1918, Warrant No. 6.....	6.00
May 17, 1918, Warrant No. 7.....	22.14
May 17, 1918, Warrant No. 8.....	33.00

Total \$870.04
 Balance on hand May 21, 1918..... 1,305.26
 Respectfully submitted,

R. D. ALWAY, M. D.,
 Secretary-Treasurer.

Moved by Dr. Treon, and carried, that the report be accepted, and referred to an auditing committee.

The President appointed Dr. Treon, Dr. Cottam, and Dr. Giere a committee to audit the books of the Treasurer.

A petition was received from Huron physicians for a charter to form a component society.

A letter from Dr. Farnsworth relative to the membership in the Mitchell Society was received.

The Council adjourned to meet at the call of the President.

SECOND SESSION—MAY 22, 3 P. M.

A meeting of the Board of Councilors was called to order with the following present: Dr. J. D. Cook, Dr. A. H. Youngs, Dr. G. S. O'Toole, Dr. Frederick Treon, Dr. G. G. Cottam, Dr. James Roane, Dr. H. R. Kenaston, and Dr. F. E. Clough.

Moved, and carried, that the petition of Huron physicians, including DeSmet, Carthage, Iroquois, Woolsey, Wessington, Miller, Carpenter, Huron, and Hitchcock, be approved, and the President and Secretary be instructed to grant them a charter, the Society to be known as the Huron Fifth District Society.

Moved, and carried, that the petition of the physicians of Lake Preston District for a new charter, the Society to be known as the Madison Third District Society, taking in the towns of Madison, Winfred, Howard, Ramona, Oldham, Lake Preston, Arlington, Volga, Brookings, Coleman, Nunda, and Chester, be approved, and the President and Secretary be instructed to grant them a charter for a component society.

Motion prevailed that the State Association remit to all members of Component Societies the dues of those in active service.

Motion prevailed that the Secretary-Treasurer's honorarium be \$250.00 per annum.

The Board adjourned to meet at the call of the President.

THIRD SESSION—THURSDAY, MAY 23, 11 A. M.

The meeting of the Board of Councilors was called to order by the President. On roll-call the following responded: Drs. H. J. G. Koobs, G. G. Cottam, H. R. Kenaston, F. V. Willhite, F. E. Clough, and R. D. Alway.

Moved by Dr. Clough, and carried, that the letter of Dr. Farnsworth be referred to the Mitchell District for action.

The auditing committee made the following report: Your auditing committee has examined the books and accounts of the Treasurer, and found them accurate.

(Signed)

DR. FREDERICK TREON,
 DR. G. G. COTTAM,
 DR. E. O. GIERE.

Moved by Dr. Cottam, and carried, that the report be accepted.

On motion Dr. Wm. Edwards, of Bowdle, was elected chairman of the Council for the ensuing year. The motion prevailed.

Moved, and carried, that Dr. James Roane, of Yankton, be elected Secretary for the ensuing year.

The Council adjourned sine die.

PROCEEDINGS OF THE GENERAL MEETING OF THE ASSOCIATION

FIRST SESSION—MAY 22, 9:30 P. M.

The Association was called to order by President H. J. G. Koobs, Scotland, and his presidential address was delivered.

Dr. F. E. Clough, of Lead, read a paper on "Injuries of the Central Nervous System."

The paper was discussed by Dr. F. V. Willhite, of Yankton; Dr. B. A. Bobb, of Mitchell, and Dr. M. C. Johnson, of Aberdeen, the discussion being closed by the essayist.

A paper was read by Dr. G. G. Cottam, Sioux Falls, on "Kidney Injuries."

This paper was discussed by Dr. F. E. Clough, Lead, and by Major E. S. Judd, of Rochester, Minn.

Dr. F. C. Rodda, of Minneapolis, presented a paper on "Infant Mortality."

Dr. Rodda's paper was not discussed.

Dr. Melvin F. Henderson, of the Mayo Clinic, Rochester, Minn., presented a paper on "Mechanical Derangement of the Knee-Joint."

Dr. Henderson's paper was not discussed.

A recess was taken until 1:30 P. M. of the same day.

SECOND SESSION—MAY 23

The Association met at the Gale Moving Picture Theatre, and was addressed by the Hon. Peter Norbeck, Governor of South Dakota.

Dr. Henry J. Jump, Major M. R. C., Surgeon-General's Office, Washington, D. C., presented a paper, accompanied with lantern slides, on "The Medical Reserve Corps."

The Association then returned to the Elks' building.

Dr. E. S. Judd, Major M. R. C., Rochester, Minn., presented a paper on "Military Surgery."

Dr. F. A. Spafford, Lieutenant M. R. C., Flaudreau, presented a paper on "Medical Advisory Boards in Selective Drafts."

Dr. R. D. Wilson, Captain C. A. M. C., Aberdeen, spoke on "Experiences in France."

The preceding three papers were not discussed.

The Association then went into business session, and received a report through Dr. G. G. Cottam, of the Committee on Medical Defense, which committee had been appointed two years ago.

After free discussion it was moved that the House of Delegates enter into a contract with some insurance company for medical defense. A rising vote was taken, and was unanimous.

An adjournment was then taken until 9:30 A. M. of the succeeding day.

THIRD SESSION—MAY 23

The Association met at the Elks' building, and was called to order by the President.

Dr. L. N. Grosvenor, of Huron, presented a paper on "Acute Suppurative Otitis Media and Its Treatment."

The discussion of this paper was opened by Dr. R. D. Alway, of Aberdeen, and the paper was generally discussed by President Koobs, of Scotland; Dr. R. D. Alway of Aberdeen; Dr. T. D. Smiley, of Mt. Vernon; Dr. E. L. Kenyon, of Chicago; and Dr. J. D. Lewis, of Minneapolis; and the discussion was closed by the essayist.

Dr. E. L. Kenyon, of Chicago, presented a paper on "The Problem of Stammering and Its Solution."

The discussion of this paper was deferred.

Dr. J. D. Lewis, of Minneapolis, Minn., read a paper on "Suspension Laryngoscopy," demonstrating the same by means of elaborate apparatus.

This subject and method were discussed by Dr. J. G. Parsons, of Sioux Falls.

Dr. F. R. Putnam, of Sioux Falls, presented a paper on "The Use of the Conjunctival Flap in Eye Injuries."

This paper was discussed by Dr. J. D. Lewis, of Minneapolis, Minn., and the discussion was closed by the essayist.

FOURTH SESSION—MAY 23

Dr. R. E. Farr, of Minneapolis, Minn., delivered an address, illustrated by stereopticon views and moving-picture films, on "Local Anesthesia."

Dr. Farr's paper was discussed by Dr. Cottam, Dr. Lewis, and Dr. E. V. Templeton, and the discussion was closed by the essayist.

Dr. R. M. Walters, of Sioux City, Iowa, presented a paper on "Why the Professional Anesthetist?"

Dr. Walters' paper was discussed by Dr. C. E. McCauley, of Aberdeen; Dr. Craig, of Sioux Falls; Dr. Mortimer Herzberg, of Vermillion; and by Dr. Frank Putnam; and the discussion was closed by the essayist.

Dr. Louis Holtz, of Aberdeen, presented a paper on "Public Health Problems and Their Relation to the General Practitioner."

Dr. Holtz' paper was discussed by Drs. Herzberg, Jenkins, and Koobs, and the discussion was closed by the essayist.

Dr. C. E. McCauley, of Aberdeen, presented a paper on "The Control of Venereal Diseases."

Dr. McCauley's paper was discussed by Drs. Herzberg, Parsons, Craig, Koobs, Buffalo, and Holtz, and the discussion was closed by the essayist.

A resolution was presented by Dr. Fryberg, seconded by Dr. Herzberg, that it be the sense of the meeting that compulsory vaccination should be enforced in the State of South Dakota.

An amendment was offered by Dr. Buffalo that the South Dakota State Medical Association recommend that every healthy child be vaccinated before it is one year old, and that the Association urge and advise that no child in South Dakota be allowed to attend any public or private school until it is vaccinated.

The amendment was duly seconded, but upon being put to vote was lost.

A vote was then taken upon the original motion, and the motion prevailed unanimously.

The Association adjourned, to meet next year at Watertown, S. D.

PRESIDENT'S ADDRESS

By H. J. G. KOOPS, M. D.

SCOTLAND, SOUTH DAKOTA

Fellow Members of the South Dakota State Medical Association:

At this, the thirty-seventh, re-occurrence of the annual sessions of this Association, it is my privilege, as your presiding officer, to extend to each and every one of you, in behalf of our Association, a most hearty welcome, to invite you to a full participation in our labors and pleasures, and to wish you all a most pleasant and profitable recreation from your daily toil.

For the honor you have conferred upon me, the highest honor that the organized medical profession of the state can confer upon one of its members, I am truly appreciative, and sincerely thank you for this confidence and distinction.

While indulging in a pardonable pride, I am at the same time very conscious of my shortcomings, and feel especially chagrined in not having been able to accomplish all that I had hoped and expected to do during the past year. Circumstances resulting from the war have forced my efforts in other directions than I had planned them, and, if I did not do my full duty to the Association, I must ask your kind indulgence and forgiveness.

Let me assure you that the will to do was there though the strenuous times did not allow me to carry out all of my plans.

In preparing this presidential address I again feel my helplessness in an attempt to bring to you anything worth while listening to. Were it not that custom demands it, and you expect it and are entitled to some sort of report, advice, opinion, or word of good cheer from your outgoing president, I should certainly not feel that there was anything I would have to say to you at this time.

Will you pardon me, please, if I deviate in this instance from following the usual custom of delivering a formal address, recounting the history and progress of medicine, of which we may all surely be proud and of which much can be said but with which you are all, doubtless, as familiar as I am myself, and let me confine myself to a few of the practical problems that confront the medical profession, especially in this state.

The thought that is predominant in our minds at present and a subject which is of the greatest importance to all of us, one in fact that should

have precedence in all of our efforts, is that concerning the war. I trust that we have each asked himself whether or not we have done all that we could loyally to support our Government and the boys that are fighting for us, and if, while conscientiously facing the question, we know that we have not, but have allowed personal, selfish reasons to interfere with what we know is our duty, may we not reconsider and hasten to fill the ranks of the loyal army that is now fighting our battle for liberty and democracy. Surely, no medical man who is imbued with the true spirit of the profession, and whose life is therefore one of service upon service, can hear the call of his country and not heed it.

About 15 per cent of the registered physicians and surgeons of this state are now in the Government service, and about 8 to 10 per cent more are wanted right now to enlist in the Medical Reserve Corps; and, when the need is once known and entrance and service conditions are all better understood, I am sure that not a member of this Association who is worthy to be counted as such, will hesitate for a moment, but will cheerfully rally to the colors as soon as he knows he is needed, and can be spared from home. For those who by reason of physical disability or age are prevented from entering the Medical Reserve Corps, or whose service is absolutely needed in their community, another branch of Government service is open, viz., the Volunteer Medical Service Corps, to be available for home service, such as the curing up of recruits, the reconstruction of returned invalided soldiers, sanitation, etc., so that there may be something for each one of us to do, and it is the part of the patriot to find out where he can be of the most service to his country regardless of his personal advancement or wishes, and to do that cheerfully and well.

I feel confident that, as I look into your faces, none of you will fail our beloved country and flag in its hour of need, but will be loyal and true patriots indeed; and when the call of duty comes you will be heard to say, "Here, ready."

I shall refrain from going into more detail regarding this topic, as it will be given further consideration during today's session, and we shall be privileged to listen to our esteemed Governor, and to Major Jump, who is here representing the Federal Government, and who is ready

and capable of giving us all the information needed.

Another subject of much importance and concern to all of us, is that of public health. This embraces the laws concerning the practice of medicine, the control of contagious diseases, vital statistics, sanitation, and education of the laity regarding health protection.

While the statute laws, in this state, concerning the practice of medicine, and the provision for creating the Board of Health and Medical Examiners, are by no means perfect, yet compared with those of many other states we have reason to feel well satisfied; and, while our State Board is still much handicapped by reason of insufficient funds for carrying out the work properly, constant progress has been made by this Board, the standard of the medical profession has constantly been raised, and only recently a very important ruling was made concerning the control of venereal diseases, which, if observed as it should be, will help materially in protecting the youth of our state.

It has for years been contended by the organized medical profession of the state that it should have some voice in the selection of medical men appointed by the governor as members to the Board of Health and Medical Examiners, for, surely, no one is better qualified than the profession of the state itself to judge of the fitness of its members to this important office, and, as our present Governor has voiced his sentiment favoring such action, providing no star chamber performances be indulged in, and such selection really represent the wishes of the medical profession of the state as a whole, we have conceived and put into operation the following plan: Once annually, during a regular session of each District Society, preferably the session at which the annual election of officers takes place, a number of physicians are chosen by vote of the members of such district as eligible candidates for appointment to the Board of Health and Medical Examiners. The number of such candidates from a district shall be equal to that of the delegates from said district to the State Association, namely, one for each twenty-five members or major fraction thereof, but each district shall be entitled to at least one.

These names are to be reported by the secretary of each district to the secretary of the State Association, who will forward a list of such names to the Governor as soon after January 1 as possible, and, with the request that appointments to the Board of Health and Medical

Examiners to be made during that year be made from such list. This procedure to be repeated each year. Said list also to be published in the State Medical Association's proceedings.

This would make a list representative of all parts of the state, and sufficiently large to give the governor considerable freedom of choice, while men so appointed to this Board could expect the united support and hearty co-operation of the medical profession of the state.

I am fully cognizant of the fact that our law provides that the school known as the "regular homeopathic" shall at all times be represented upon such Board, and, while this is an absurdity because there is no good reason why any one school should be specifically named, and it is the height of folly legally to recognize any sectarian medicine, as we all should and do stand on an equal footing before the law as medical practitioners when we have once complied with the requirements, and have become a registered licentiate to practice medicine and surgery.

I am sure that the Federal Government in the selection of its medical army or navy officers never makes any distinction of school or creed, but recognizes only qualifications and merit, and this is as it should be. However, while this is law, the governor of the state is bound to regard its provisions, and this can easily be met by the profession of the state being careful always to have one or more graduates of a homeopathic school on this list of candidates, and to specify these as such.

It might be argued that the selection of such Homeopathic candidate be left only to the graduates of Homeopathic schools practicing in this state, but this would not be a fair demand as the South Dakota State Medical Association now represents about 60 per cent of all legally qualified physicians in the state, as practically all of the best physicians of the state are members of the Association, as every moral, ethical, legally qualified, and honorable member of the medical profession may become a member, as the 40 per cent of non-members are largely made up of men who are too old for active practice, men who, it seems to me, are for non-scientific but selfish reasons hiding behind the screen of sectarian medicine, and such black sheep of the profession who for good reason are unable to obtain membership, and, further, because in this democracy of a free state and nation a majority should rule, and the majority of regularly qualified physicians and surgeons of this state are mem-

bers of the South Dakota State Medical Association.

While we are speaking about medical laws, let us remember that law tinkering goes on at least every two years, that the primaries are close at hand, that we elect members to our legislature this fall, that during practically every session of the legislature some attempt is made at legislation pernicious to the medical profession, that we must constantly be on the lookout, not only to remedy such defects as our present laws may contain, but must safeguard such good laws as we now have and if possible prevent the introduction or at least adoption of such new laws as may handicap medical progress or license quackery to the detriment of, not alone the regular medical profession, but the public welfare and health, for any laws relating to public health must be enacted, primarily, for the protection of the public, and not with the idea of giving any man or class of men prerogatives *per se* or a monopoly.

Therefore before we go to the polls let us not forget to make the acquaintance of the candidates for state senators and representatives, and interrogate them on the subject of medical legislation.

Let us have an understanding before the election, and let us be sure to interest ourselves in behalf of the men who are right on this subject. Please remember that this is important, that it is right, and that it is our duty; only let us be fair and square to all concerned.

We shall doubtless have a report from our Committee on Legislation, and I hope they will have worked out some definite plan for us to follow.

In regard to the control of contagious diseases, I can say that I believe the present regulations of our State Board of Health are good and efficient, but, on the whole, there is still a lack of information on the part of too many physicians as to its provisions, and there is more or less neglect in reporting, quarantining, and isolating cases of contagious diseases.

I can not emphasize too strongly the desirability of a whole-time health officer for a county, or possibly a district, and I hope that the time is not far distant when the public will realize that proper and efficient health protection is a profitable investment at almost any cost. In the meantime I would urge every physician to co-operate in the fullest measure with the state and county boards of health.

In this connection let me briefly refer also to

our well-equipped and splendidly conducted State Health Laboratory, where the more difficult laboratory examinations, including Wassermann tests for establishing diagnosis, are promptly made for the physicians of the state without charge, and where diphtheria antitoxines and antityphoid and smallpox vaccines may be obtained without cost on proper requisition by the doctors of the state. I wonder if we all make use of this splendid opportunity and privilege as much as we might and ought for the good of our patients?

In the matter of state sanitation, it seems to me that some improvement could be made over present methods. It is customary now for members of the State Board of Health to go over the state at least once a year and inspect the various State institutions regarding sanitary conditions, also to inspect public water supplies, sewage-disposal plants, etc., when needed; and the State Board regulations provide that the county board of health look after the inspection and sanitation of slaughter-houses, all of which work, it seems to me, could better and ought to be done by state sanitary engineers one or more of whom should be in the constant employ of the State Board of Health. The regulation providing for the burial of dead animals by or under the direction of the superintendent of the county board of health, it seems to me, is also not in keeping with the work of a physician; and, as no medical knowledge is needed for the performance of such duty, it might be made incumbent upon the county sheriff to look after this work.

Vital statistics of the state should be fully kept by, and all reports by made to, the State Board of Health.

Instead of marriage, birth, and death reports being sent to the department of history of the state, as I understand is now the case, they should be sent to the State Board of Health, as these facts are correlated and of importance in connection with reports, and statistics on diseases. In this connection let me urge physicians to be more careful in the matter of giving causes of death in making out their death-reports. I have had occasion to look over the death-reports turned in during the last year or more, and I have been surprised to find so many ambiguous terms used, giving no definite information at all as regards the true cause of death. If at all possible, the real pathology causing death should be stated in each case. When such terms as "heart failure," "uremic poisoning," "miscarriage," etc.,

are used, statistics as to the real causes of death are obviously valueless.

Of very great importance is the education of the public on matters pertaining to sanitation and health-protection. Good work has been done by our committees of Public Health and Education for several years past, and, while the process of education is slow, while large efforts are required on the part of some which often seem wasted, those who are doing that work can rest assured that every true effort along that line is bound to bear fruit in time, and those of us who are at all observant can easily see how public opinion regarding proper sanitation, isolation, and quarantine, protective vaccination, etc., is gradually changing for the better, and when the general public becomes more awake and enlightened on the subject of health-protection it will not be hard to get the necessary funds to carry on health-work properly, and such political chicanery as is apparently now being perpetrated by the mayor of New York in wrecking the health department of that great city, will not be allowed. The time must come when politicians will not dare to use the agencies that have for their purpose the safeguarding of the health of the people as a means for bestowing political favors. The time must come when the protection of the child will be valued more than the protection of the pig. I do not mean to say that the money now spent for the conservation of hogs and cattle is not well spent, but the State ought to be willing to spend as much or more for the conservation of the child. The physician, above all other persons, is familiar with the facts pertaining to this subject; and every one of us ought to act as a bureau of information, talking and writing about it until people become so familiar with it that proper health measures will be popularly asked for, instead of some one having to fight for them.

I have heard some physicians intimate that it is not good business to work and talk to destroy one's own business, but this is obviously short-sighted and a wrong view to take, as there will be as much work connected with the prevention of disease as in combating it after it has been contracted. The work will be of a different character, but surely as pleasant, and the individual concerned, if intelligent, ought to and surely will gladly pay as much for being kept in good health as he will for being treated after getting sick. He will be considerably the gainer in being spared his suffering, and in saving the time for work that he would have had to lie in bed, while sick. Health-protection is one of the best paying prop-

ositions for everyone. Much valuable material on this topic is available from publications of the American Medical Association, either gratuitous or at small cost. The work is under the direction of the Council on Health and Public Instruction, and it would be well for every physician to get a list of the available publications and material, and to make free use of it. I feel confident that with the education in sanitation and other health-protection that the boys who are now in the United States service are getting, this subject will be mighty popular bye and bye; and it will probably be well for all of us to keep posted on modern methods of sanitation and prevention of disease if we do not want to be considered as old fogies and moss-backs.

Lastly, let me say a few words on the relation of physicians to each other.

It is said that organization is the breath of life. If this is true,—and it is true,—it is self-evident that to be a live physician, one must be a part, and an active part, of an organized body of physicians. The greatest of such organizations is the American Medical Association, with its state and district societies as component parts; and for any American doctor not to join this association must mean that he either belongs to one of the classes I have already referred to in this address, or that he is so stupified by his egoism that he does not realize that he is asleep and gradually fossilizing.

It seems to me that a physician who does not attend medical-society meetings must either get to feeling that he knows it all, when, in fact, he does not know enough to recognize his own mistakes and failures, or he must get so discouraged with himself and the practice of medicine that he will want to get out of it at any cost. By attending medical-society meetings one discovers, on the one hand, that there are others who know just as much as, or a little more than, he does himself; and, on the other hand, he finds that others have their troubles and make mistakes as well as he does himself, so that such affiliation and personal contact with fellow-practitioners acts as a balance-wheel, and keeps him steady on the rough and rocky road of his professional life.

Again, in the district society and State Association a doctor receives what might be called his intellectual rating. He can here find out his assets and liabilities, and it is well for him to take stock often and to keep his balance on the right side of the ledger.

There is one criticism that I would make with

the average program of medical societies and, in particular, with that of our State Association, which is that we do not pay enough attention to the business side of our calling and to medical society affairs. This does not mean we should foster the spirit of commercialism at the expense of high, altruistic motives and ideals, but with most of us the business side of our profession needs cultivating as much as the scientific side, and to know more about the State Association's affairs on the part of every member can only help to increase the interest in the same.

It has always seemed to me that the reports of the various committees should be made on the floor of the general meeting, instead of in the House of Delegates, and that all of the members should have a voice in the election of the officers of the State Association.

I do not mean to intimate that the election as conducted now is not fair, but I believe it would make for greater interest on the part of the average individual to have a voice in at least some of the business affairs of the Association.

Another topic that is usually shunned is that of medical ethics. I know that we have these in print, that they have been formulated by good men, and are adopted by the American Medical Association, that the observing of these ethics is supposed to be incumbent on every member as he joins the district society, but how many of you are fully acquainted with them, and how many of those of you who are, live up to the spirit of them even if not the letter?

Oh, yes, we all profess to be ethical and doubtless most of us are more or less. Why, if these principles of ethics are right and good should we not consider them in open session sometime, and insist on all of them being observed; or, if they are obsolete or non-essential, let us all know it, so we may govern ourselves accordingly. Those of us who have been in practice for a good many years know from experience how to adjust ourselves to them, but do we not owe it to the younger members of the profession to give this topic due and honest consideration at times?

One of our greatest needs is honest and sin-

cere co-operation. We should rise above the feeling that we are competitors. Team-work is what makes for efficiency, and I believe the time is not far distant when in every town where there are two or more doctors, these will have to learn to co-operate closely.

The field of medicine and surgery is too large for any one individual to be proficient in all of the branches. In the larger towns and cities specialism is, of course, well established, but in the smaller towns and communities people are subject to all of the ailments the same as in larger centers of population, and, as these people are entitled to just as efficient help as those in the cities, the doctors in all towns should learn to co-operate, should each qualify himself particularly along some definite line of work, and, while it would not be practicable in places where only three or four doctors can make a living for each to restrict his work to some specialty, they can all be general practitioners, and there need be no partnership affair, but each one can specialize along some definite line, and it can be understood by all that such work as falls in any one's particular line or specialty shall be referred to him. This would mean that better service could be given the patient, that each individual doctor could have better office equipment for his particular work, that money could be saved in office paraphernalia as there would not need be the duplication of much expensive apparatus and books, and it would make life certainly much pleasanter and the practice of medicine easier than it is now for the average small-town practitioner.

The idea is certainly not Utopian, but is entirely feasible of execution, and the sooner we get together on this proposition the better it will be for all of us.

Some day the men who are now in the army and navy service will come back. They will be specialists, more or less, and when they do return this will be a splendid time to make such arrangement as here suggested if it is not feasible to do it before.

DISTRICT AND COUNTY ROSTER

*Members of the M. R. C. in service.

†Members of the M. R. C. but not yet in service.

ABERDEEN DISTRICT MEDICAL SOCIETY—NO. 1

PRESIDENT

Baldwin, F. M. Redfield

SECRETARY

Devereaux, T. J. Aberdeen

Adams, B. A. Bristol

Adams, J. F. Aberdeen

Aldrich, H. H. Wessington

†Alway, R. D. Aberdeen

Bailey, F. C. Redfield

Bates, W. A. Northville

Baer, T. H. Timber Lake

Beil, A. Selby

Brosseau, J. E. Frankfort

*Brown, A. E. Webster

Bruner, J. E. Frederick

Carpenter, G. S. Bowdle

*Carson, J. D. Faulkton

Chase, A. E. Northville

*Chichester, J. G. Redfield

Cook, J. F. D. Langford

Countryman, G. E. Aberdeen

Crain, F. M. Redfield

Creamer, Frank H. Dupree

Curtis, J. E. Lemmon

Deertz, J. Brentford

Dinsmore, W. E. Claremont

*Dunn, J. E. Groton

Edwards, Wm. Bowdle

Farrell, W. D. Aberdeen

*Ferguson, W. J. Millbank

*Field, L. M. Aberdeen

*Fiksdal, M. J. Webster

Flett, Charles Milbank

Freyberg, F. W. Aberdeen

Gerdes, O. H. Eureka

*Harris, H. G. Wilmot

Hart, B. M. Onida

Hart, Robert Groton

Hawkins, A. P. Waubay

Herman, J. D. Conde

Hill, Robert. Ipswich

Hoagland, C. C. Veblen

Holmes, A. E. Verdon

Homan, C. A. Aberdeen

Jackson, E. B. Aberdeen

Jacotel, J. A. Milbank

Jenkins, P. B. Waubay

Johnston, M. C. Aberdeen

Jones, R. R. Britton

*Kaps, F. O. Britton

Kerns, G. G. Leola

Kettner, J. C. Leola

King, H. I. Aberdeen

King, Owen Aberdeen

Kjerland, T. N. Webster

Kraushaar, F. J. Aberdeen

Lavery, C. J. Aberdeen

*Longstreth, W. I. Sisseton

Mayer, R. G. Cresbard

McAdams, J. E. Morrystown

McCauley, C. E. Aberdeen

*Mertens, J. J. Gettysburg

Miller, Frank. Aberdeen

Miller, J. F. Andover

Miller, V. M. Mellette

Morton, G. M. Effington

Murdy, B. C. Aberdeen

Murphy, R. L. Aberdeen

Murphy, T. W. Pierpont

Olson, C. O. Groton

Peabody, Percy Webster

Potter, Geo. W. Redfield

Pugh, G. F. Stratford

Quinn, J. F. Bowdle

Ramsey, E. T. Clark

Rathbun, J. P. Seneca

Rock, H. J. Sioux Falls

Rosenthal, Sigmond Java

Seeman, C. A. Tulare

Seeman, H. J. Rockham

Sorenson, A. A. Aberdeen

Stegman, S. B. Gettysburg

*Sutton, Dewey Redfield

Totten, F. C. Lemmon

Twining, G. H. Mobridge

Van Dalsem, Friede. Huron

Whiteside, J. D. Aberdeen

WATERTOWN DISTRICT MEDICAL SOCIETY—NO. 2

PRESIDENT

Hendricson, Paul. Vienna

SECRETARY

Hammond, M. J. Watertown

Abbott, G. A. Watertown

Ash, James C. Garden City

Bartron, H. J. Watertown

Bates, J. S. Clear Lake

Benner, W. J. Willow Lake

Burlingame, R. M. Watertown

Campbell, R. F. Watertown

Church, E. O. Revello

*Crawford, J. H. Castlewood

*Edgar, J. D. Henry

Edsall, J. L. Wallace

Finnerud, H. M. Watertown

Freeburg, H. M. Watertown

Frink, O. G. South Shore

Giere, E. O. Watertown

Gueffroy, H. A. Frankfort

Haraldson, O. A. Watertown

Johnson, A. E. Watertown

*Kriesel, W. A. Watertown

Koran, Finn Watertown

*Lockwood, J. H. Garden City

McIntyre, P. S. Bradley

Magee, W. G. Watertown

*Mullen, R. W. Florence

O'Bryan, H. J. Watertown

O'Toole, C. S. Watertown

*Parsons, H. C. Watertown

Richards, G. H. Clear Lake

Sherwood, H. W. Doland

Simpson, E. D. Watertown

Smith, S. W. Watertown

Staley, F. H. Hazel

Tarbell, H. A. Watertown

Vaughn, J. B. Castlewood

Westaby, J. R. Clark

*Williams, C. A. Doland

LAKE PRESTON DISTRICT MEDICAL SOCIETY—NO. 3

PRESIDENT

Green, B. T. Brookings

SECRETARY

Baker, J. C. Ramona

Allison, B. S. Madison

Bostrom, A. E. De Smet

*Cowgill, C. H. Iroquois

Crafts, Earl. Minneapolis, Minn.

*Dyar, G. H. Clear Lake

Eyman, E. V. Madison

*Fisk, R. R. Dell Rapids

Frudenberg, H. H. Madison

Garrison, John F. Oldham

Grosvenor, L. N. Huron

Grove, E. H. Arlington

Gulbrandson, G. H. Brookings

Hoode, C. H. R. Madison

Hopkins, N. K. Arlington

Kellog, H. E. Madison

Leach, W. O. Huron

Lee, James O. Lake Norden

McKie, J. F. Wessington

†Noble, A. G. Howard

Noble, H. B. Howard

Scanlan, D. L. Volga

Schwendener, J. E. Bryant

Sheets, O. B. Carthage

Shirley, J. C. Huron

†Sprague, B. H. Huron

Thomas, Benj. Huron

Torwick, E. E. Volga

Westaby, R. S. Madison

*Wood, T. J. Huron

*Wright, O. R. Huron

PIERRE DISTRICT MEDICAL SOCIETY--NO. 4

PRESIDENT
Youngs, A. H. Pierre
SECRETARY
Morrisey, R. J. Ft. Pierre

*Kenney, H. T. Pierre
Langsdale, G. H. Highmore
McLaurin, A. A. Pierre

†Martin, H. B. Harrold
Minard, R. W. Midland
Riggs, T. F. Pierre
Stoner, W. W. Highmore

MITCHELL DISTRICT MEDICAL SOCIETY--NO. 6

PRESIDENT
Young, E. M. Plankinton
SECRETARY
†Gillis, F. D. Mitchell
*Ball, W. R. Mitchell
Benckleman, W. H. Stickney
Bobb, B. A. Mitchell
Bobb, C. S. Mitchell
Bobb, E. V. Mitchell
Bower, Chas. A. Mitchell

Bright, H. F. White Lake
Buffaloe, A. J. Mitchell
Clauser, G. A. Bridgewater
Delaney, W. A. Mitchell
Dunn, A. B. Chamberlain
Gifford, A. J. Alexandria
Hoyne, A. H. Salem
Jenkinson, H. E.
..... Wessington Springs
Just, Guy H. Pukwana
Kammerling, Theo. Spencer

Kelly, R. A. Mitchell
Kimble, O. A. Murdo
LaShier, B. W. Armour
McManus, Clara. Gann Valley
Maytum, W. J. Alexandria
Sprecher, Samuel. Tripp
†Stewart, F. H. Kimball
Templeton, C. V. Woonsocket
Treon, Fred. Chamberlain
Waldner, J. L. Parkstor

SIOUX FALLS DISTRICT MEDICAL SOCIETY--NO. 7

PRESIDENT
Parsons, J. G. Sioux Falls
SECRETARY
Zimmerman, Goldie. Sioux Falls
Billion, T. J. Sioux Falls
Bliss, P. D. Colton
Bower, C. F. Hartford
Brandon, P. E. Sioux Falls
†Cottam, G. G. Sioux Falls
†Craig, D. W. Sioux Falls
Culver, C. F. Sioux Falls
Day, H. J. Harrisburg
Devall, F. C. Garretson
†Donahoe, S. A. Sioux Falls
†Donahoe, W. E. Sioux Falls
Eagan, J. B. Dell Rapids
†Egan, M. H. Sioux Falls
Gage, E. E. Sioux Falls

Grove, A. F. Dell Rapids
Grove, M. M. Dell Rapids
Housman, W. McK. Dell Rapids
Hummer, H. R. Canton
Hyden, A. Alcester
*Jones, T. E. Sioux Falls
Jordan, A. A. Hudson
Joyce, E. Hurley
Keller, S. A. Sioux Falls
Keller, W. F. Sioux Falls
Lewison, Eli. Canton
Moore, W. E. Sioux Falls
Nessa, N. J. Sioux Falls
Parke, L. L. Canton
*Perkins, E. L. Sioux Falls
Price, E. F. Alcester
†Putnam, E. D. Sioux Falls
†Putnam, F. I. Sioux Falls
Reagan, R. Garretson

Rider, A. S. Flandreau
Roberts, T. S. Sioux Falls
†Roberts, W. P. Sioux Falls
†Rundlett, D. L. Sioux Falls
Schwartz, Jos. Sioux Falls
Sherwood, H. H. Humbolt
Skogen, T. T. Flandreau
Smedley, Irene. Sioux Falls
*Spafford, F. A. Flandreau
Stern, M. A. Sioux Falls
*Stevens, G. A. Sioux Falls
Stevens, R. G. Sioux Falls
*Thompson, T. G. Sioux Falls
Trail, C. J. Sioux Falls
Tufts, A. H. Sioux Falls
†Van Demark, G. E. Sioux Falls
Vaughn, L. B. Hurley
Zetlitz, Arne. Sioux Falls
Zetlitz, K. A. L. Sioux Falls

YANKTON DISTRICT MEDICAL SOCIETY--NO. 8

PRESIDENT
*Smith, F. C. Yankton
SECRETARY
Roane, James. Yankton
Adams, G. S. Yankton
*Anderson, E. T. Platte
Augsburger, E. D. Menno
Beall, L. F. Irene
Berry, S. G. Tyndall
Bigler, Lottie G. Armour
Blezek, F. M. Tabor
Burkland, P. R. Vermillion
Bushnell, Wm. F. Elk Point
Collisi, Nicolas. Vermillion
Crecelius, H. A. Volin
Cruickshank, Thos. Vermillion
Duguid, J. O. Springfield
Eagon, Alonzo. Turton

*Elliott, A. V. Beresford
Ellis, John. Elk Point
Frink, R. P. Wagner
Greenfield, J. C. Avon
Gross, C. C. Yankton
Herzberg, Mortimer. Vermillion
Hohf, J. A. Yankton
Hohf, S. M. Yankton
Isaac, J. P. Freeman
Kalayjian, D. S. Parker
Kaufmann, E. J. Marion
Keeling, C. M. Springfield
Klima, Hermanigald. Tyndall
Koobs, H. J. G. Scotland
*Landmann, G. A. Scotland
*Langley, C. S. Lake Andes
Mead, L. C. Yankton
*Moodie, W. C. Elk Point

†Moore, D. V. Yankton
Moore, F. A. Lesterville
Morehouse, E. M. Yankton
Murphy, Jennie C. Yankton
*Newby, H. D. Parker
Orvis, Harriet. Yankton
Payne, R. H. Tripp
Pinard, P. H. A. Jefferson
*Pinard, P. R. Wagner
Posthuma, Anne. Centerville
Sedlacek, F. A. Omaha, Neb
Stansbury, E. M. Vermillion
Stewart, J. L. Wakonda
*Stiffler, M. L. Yankton
Struble, A. J. Centerville
†Swezey, F. A. Wakonda
Willhite, F. V. Yankton
Wipf, A. A. Freeman

BLACK HILLS DISTRICT MEDICAL SOCIETY—NO. 9

PRESIDENT

Chassell, J. L. Belle Fourche

SECRETARY

Richards, F. A. Whitewood

*Allen, A. G. Deadwood

Clough, F. E. Lead

Crane, H. L. Lead

Fleeger, R. B. Lead

Freeman, J. W. Lead

Hare, Carlyle Belle Fourche

Hargens, C. W. Hot Springs

Hills, W. C. Newell

Hodges, V. S. Terry

Hultz, Eugene B. Hill City

Jackson, A. S. Lead

Markel, I. J. Lead

Martin, J. H. Lead

Minty, F. W. Rapid City

Robinson, W. E. Rapid City

Walsh, J. M. Rapid City

Wilcox, H. H. Hot Springs

Woodworth, R. E. Custer

ROSEBUD DISTRICT MEDICAL SOCIETY—NO. 10

PRESIDENT

Swett, Chas. H. Winner

SECRETARY

Bryant, F. A. Herrick

Claggett, M. H. Fairfax

Hofer, M. M. Dallas

Kenaston, H. R. Bonesteel

*Kimball, A. P. Winner

Murnan, H. A. Gregory

Overton, R. V. Dixon

*Quinn, R. J. Burke

Quinn, W. M. Winner

Waterman, J. C. Burke

Winsett, W. E. Dallas

ALPHABETICAL ROSTER

Abbott, G. A. Watertown

Adams, B. A. Bristol

Adams, G. S. Yankton

Adams, J. F. Aberdeen

Aldrich, H. H. Wessington

*Allen, A. G. Deadwood

Allison, B. S. Madison

†Alway, R. D. Aberdeen

*Anderson, E. T. Platte

Ash, James C. Garden City

Augspurger, E. D. Menno

Baer, T. H. Timber Lake

Bailey, F. C. Redfield

Baker, J. C. Ramona

Baldwin, F. M. Redfield

*Ball, W. R. Mitchell

Bartron, H. J. Watertown

Bates, J. S. Clear Lake

Bates, W. A. Northville

Beall, L. F. Irene

Beil, A. Selby

Benckleman, W. H. Stickney

Benner, W. J. Willow Lake

Berry, S. G. Tyndall

Bigler, Lottie G. Armour

Billion, T. J. Sioux Falls

Blezek, F. M. Tabor

Bliss, P. D. Colton

Bobb, B. A. Mitchell

Bobb, Clyde S. Mitchell

Bobb, E. V. Mitchell

Bostrom, A. E. De Smet

Bower, Chas. A. Mitchell

Bower, C. F. Hartford

Brandon, P. E. Sioux Falls

Bright, H. F. White Lake

Brosseau, J. E. Frankfort

*Brown, A. E. Webster

Bruner, J. E. Frederick

Bryant, F. A. Herrick

Buffaloe, A. J. Mitchell

Burkland, P. R. Vermillion

Burlingame, R. M. Watertown

Bushnell, Wm. F. Elk Point

Campbell, R. F. Watertown

Carpenter, G. S. Bowdle

*Carson, J. D. Faulkton

Chase, A. E. Northville

Chassell, J. L. Belle Fourche

*Chichester, J. G. Redfield

Church, E. O. Revello

Claggett, M. H. Fairfax

Clauser, G. A. Bridgewater

Clough, F. E. Lead

Collisi Nicolas Vermillion

Cook, J. F. D. Langford

*Cottam, G. G. Sioux Falls

Countryman, G. E. Aberdeen

*Cowgill, C. H. Iroquois

Crafts, Earl. Minneapolis, Minn.

†Craig, D. W. Sioux Falls

Crain, F. M. Redfield

Crane, H. L. Lead

*Crawford, J. H. Castlewood

Creamer, F. H. Dupree

Crecelius, H. A. Volin

Cruikshank, Thos. Vermillion

Culver, C. F. Sioux Falls

Curtis, J. E. Lemmon

Day, H. J. Harrisburg

Deertz, J. Brentford

Delaney, W. A. Mitchell

Devall, F. C. Garretson

Devereaux, T. J. Aberdeen

Dinsmore, W. E. Claremont

†Donahoe, S. A. Sioux Falls

†Donahoe, W. E. Sioux Falls

Duguid, J. O. Springfield

Dunn, A. B. Chamberlain

*Dunn, J. E. Groton

*Dyar, G. H. Clear Lake

Eagan, J. B. Dell Rapids

Eagon, Alonzo Turton

*Edgar, J. D. Henry

Edsall, J. L. Wallace

Edwards, Wm. Bowdle

†Egan, M. H. Sioux Falls

*Elliott, A. V. Beresford

Ellis, John Elk Point

Eyman, E. V. Madison

Farrell, W. D. Aberdeen

*Ferguson, W. J. Milbank

*Field, L. M. Aberdeen

*Fiksdal, M. J. Webster

Finnerud, H. M. Watertown

*Fisk, R. R. Dell Rapids

Fleeger, R. B. Lead

Flett, Charles Milbank

Freeburg, H. M. Watertown

Freeman, J. W. Lead

Freyberg, F. W. Aberdeen

Frink, O. G. South Shore

Frink, R. P. Wagner

Frudensfeld, H. H. Madison

Gage, E. E. Sioux Falls

Garrison, John F. Oldham

Gerdes, O. H. Eureka

Giere, E. O. Watertown

Gifford, A. J. Alexandria

†Gillis, F. D. Mitchell

Green, B. T. Brookings

Greenfield, J. C. Avon

Gross, C. C. Yankton

Grosvenor, L. N. Huron

Grove, A. F. Dell Rapids

Grove, E. H. Arlington

Grove, M. M. Dell Rapids

Gueffroy, H. A. Frankfort

Gulbrandson, G. H. Brookings

Hammond, M. J. Watertown

Haraldson, O. A. Watertown

Hare, Carlyle Belle Fourche

Hargens, C. W. Hot Springs

*Harris, H. G. Wilmot

Hart, B. M. Onida

Hart, Robert Groton

Hawkins, A. P. Waubay

Hendricson, Paul. Vienna

Herman, J. D. Conde

Herzberg, Mortimer. Vermillion

Hill, Robert Ipswich

Hills, W. C. Newell

Hoagland, C. C. Veblen

Hodges, V. S. Terry

Hofer, M. M. Dallas

Hohf, J. A. Yankton

Hohf, S. M. Yankton
 Holmes, A. E. Verdon
 Homan, C. A. Aberdeen
 Hoode, C. H. R. Madison
 Hopkins, N. K. Arlington
 Hoyne, A. H. Salem
 Housman, W. McK. Dell Rapids
 Hultz, Eugene B. Hill City
 Hummer, H. R. Canton
 Hyden, A. Alcester
 Isaac, J. P. Freeman
 Jackson, A. S. Lead
 Jackson, E. B. Aberdeen
 Jacotet, J. A. Milbank
 Jenkins, P. B. Waubay
 Jenkinson, H. E.
 Wessington Springs
 Johnson, A. E. Watertown
 Johnston, M. C. Aberdeen
 Jones, R. R. Britton
 *Jones, T. E. Sioux Falls
 Jordan, A. A. Hudson
 Joyce, E. Hurley
 Just, Guy H. Pukwana
 Kalayjian, D. S. Parker
 Kammerling, Theo. Spencer
 *Kaps, F. O. Britton
 Kaufmann, E. J. Marion
 Keeling, C. M. Springfield
 Keller, S. A. Sioux Falls
 Keller, W. F. Sioux Falls
 Kelly, R. A. Mitchell
 Kellog, H. E. Madison
 Kenaston, H. R. Bonesteel
 *Kenney, H. T. Pierre
 Kerns, G. G. Leola
 Kettner, J. C. Leola
 *Kimball, A. P. Winner
 Kimble, O. A. Murdo
 King, H. I. Aberdeen
 King, Owen Aberdeen
 *Kriesel, W. A. Watertown
 Kjerland, T. N. Webster
 Klima, Hermanigald. Tyndall
 Koobs, H. J. G. Scotland
 Koran, Finn Watertown
 Kraushaar, F. J. Aberdeen
 *Landmann, G. A. Scotland
 *Langley, C. S. Lake Andes
 Langsdale, G. H. Highmore
 LaShier, B. W. Armour
 Lavery, C. J. Aberdeen
 Leach, W. O. Huron
 Lee, James O. Lake Norden
 Lewison, Eli Canton
 *Lockwood, J. H. Garden City
 *Longstreth, W. I. Sisseton
 McAdams, J. E. Morristown
 McCauley, C. E. Aberdeen
 McIntyre, P. S. Bradley
 McKie, J. E. Wessington
 McLaurin, A. A. Pierre
 McManus, Clara. Gann Valley
 Magee, W. G. Watertown
 Markel, I. J. Lead
 †Martin, H. B. Harrold

Martin, J. H. Lead
 Mayer, R. G. Cresbard
 Maytum, W. J. Alexandria
 Mead, L. C. Yankton
 *Mertens, J. J. Gettysburg
 Miller, Frank. Aberdeen
 Miller, J. F. Andover
 Miller, V. M. Mellette
 Minard, R. W. Midland
 Minty, F. W. Rapid City
 *Moodie, W. C. Elk Point
 Morton, G. M. Effington
 Morrissey, R. J. Ft. Pierre
 †Moore, D. V. Yankton
 Moore, F. A. Lesterville
 Moore, W. E. Sioux Falls
 Morehouse, E. M. Yankton
 *Mullen, R. W. Florence
 Murdy, B. C. Aberdeen
 Murdy, R. L. Aberdeen
 Murnan, H. A. Gregory
 Murphy, Jennie C. Yankton
 Murphy, T. W. Pierpont
 Nessa, N. J. Sioux Falls
 *Newby, H. D. Parker
 *Noble, A. G. Howard
 Noble, H. B. Howard
 O'Bryan, H. J. Watertown
 O'Toole, C. S. Watertown
 Olson, C. O. Groton
 Overton, R. V. Dixon
 Orvis, Harriet Yankton
 Parke, L. L. Canton
 *Parsons, H. C. Watertown
 Parsons, J. G. Sioux Falls
 Payne, R. H. Tripp
 Peabody, Percy Webster
 *Perkins, E. L. Sioux Falls
 Pinard, P. H. A. Jefferson
 *Pinard, P. R. Wagner
 Potter, Geo. W. Redfield
 Posthuma, Anne Centerville
 Price, E. F. Alcester
 Pugh, G. F. Stratford
 †Putnam, E. D. Sioux Falls
 †Putnam, F. L. Sioux Falls
 Quinn, J. F. Bowdle
 *Quinn, R. J. Burke
 Quinn, W. M. Winner
 Ramsey, E. T. Clark
 Rathbun, J. P. Seneca
 Reagan, R. Garretson
 Richards, G. H. Clear Lake
 Richards, F. A. Whitewood
 Rider, A. S. Flandreau
 Riggs, T. F. Pierre
 Roane, James Yankton
 Roberts, T. S. Sioux Falls
 †Roberts, W. P. Sioux Falls
 Robinson, W. E. Rapid City
 Rock, H. J. Sioux Falls
 Rosenthal, Sigmond Java
 †Rundlett, D. L. Sioux Falls
 Scanlan, D. L. Volga
 Schwartz, Jos. Sioux Falls

Schwendener, J. E. Bryant
 Sedlacek, F. A. Omaha, Neb
 Seeman, C. A. Tulare
 Seeman, H. J. Rockham
 Sheets, O. B. Carthage
 Sherwood, H. H. Humbolt
 Sherwood, H. W. Doland
 Shirley, J. C. Huron
 Simpson, E. D. Watertown
 Skogen, T. T. Flandreau
 Sorenson, A. A. Aberdeen
 Smedley, Irene. Sioux Falls
 *Smith, F. C. Yankton
 Smith, S. W. Watertown
 *Spafford, F. A. Flandreau
 †Sprague, B. H. Huron
 Sprecher, Samuel. Tripp
 Staley, F. H. Hazel
 Stansbury, E. M. Vermillion
 Stegman, S. B. Gettysburg
 Stern, M. A. Sioux Falls
 *Stevens, G. A. Sioux Falls
 Stevens, R. G. Sioux Falls
 †Stewart, F. H. Kimball
 Stewart, J. L. Wakonda
 *Stiffler, M. L. Yankton
 Stoner, W. W. Highmore
 Struble, A. J. Centerville
 *Sutton, Dewey Redfield
 Swett, Chas. H. Winner
 †Swezey, F. A. Wakonda
 Tarbell, H. A. Watertown
 Templeton, C. V. Woonsocket
 Thomas, Benj. Huron
 *Thompson, T. G. Sioux Falls
 Torwick, E. E. Volga
 Totten, F. C. Lemmon
 Trail, C. J. Sioux Falls
 Treon, Fred. Chamberlain
 Tufts, A. H. Sioux Falls
 Twining, G. H. Mobridge
 Van Dalsem, Friede. Huron
 †Van Demark, G. E. Sioux Falls
 Vaughn, J. B. Castlewood
 Vaughn, L. B. Hurley
 Waldner, J. L. Parkston
 Walsh, J. M. Rapid City
 Waterman, J. C. Burke
 Westaby, J. R. Clark
 Westaby, R. S. Madison
 Whiteside, J. D. Aberdeen
 Wilcox, H. H. Hot Springs
 Willhite, F. V. Yankton
 *Williams, C. A. Doland
 Winsett, W. E. Dallas
 Wipf, A. A. Freeman
 Woodworth, R. E. Custer
 *Wood, T. J. Huron
 *Wright, O. R. Huron
 Young, E. M. Plankinton
 Youngs, A. H. Pierre
 Zimmerman, Goldie. Sioux Falls
 Zetlitz, Arne Sioux Falls
 Zetlitz, K. A. L. Sioux Falls

THE JOURNAL-LANCET

Represents the Medical Profession of

Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the

North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.

H. J. ROWE, M. D. - - - Casselton, N. D.

H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

JULY 1, 1918

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION

Chicago, as usual, proved a big drawing card for the meeting-place of the American Medical Association. The registration overtopped that of New York in 1917, being 5,553, exceeding by 317 the total of the New York meeting. This large attendance and the general satisfaction with the meeting in Chicago are credited to several causes. First, Chicago is a convenient city to reach, and next it has a variety of meeting-places which are conveniently and sufficiently large, and then the program was so made up that it contained many interesting war problems discussed by particularly interesting men.

The opening night (Tuesday night), when the retiring president, Dr. C. H. Mayo, introduced the incoming president, Dr. Arthur Dean Bevan, showed the enthusiasm of the audience. This meeting took place in the great Auditorium building, which was filled from pit to dome, and those of us who occupied the dome areas were not able to hear very much, and the vision from the top gallery to the stage reminded one of a marionette show. The members of the band looked like dolls sitting in doll shows, and the honor guard of medical officers looked small in comparison with their shape and size on the street. The entrance of the officers and invited guests was very exhilarating and created tremendous applause. As usual, the audience was welcomed

by the president of the State Association and the president of the Chicago Medical Society, and then, in very natural sequence, by the Governor of Illinois, the Hon. Frank O. Lowden. Then followed the address of the newly elected president, who took up a varied chain of topics for his subject, in which he referred to the organization and activities of the American Medical Association, with which he has been so long and so earnestly connected, and has been one of the active workers on its Committee of Education. He then passed to the demands made by the war, and asked and answered the question as to who represented the medical profession. He referred, too, to the honor roll which was so wonderfully gotten up and printed in a recent issue of the *Journal of the American Medical Association*. He also referred to the expansion of the medical department in general, and the supply of medical men. He looked upon General Gorgas as one of the prominent assets of the country. No one will enter a protest to this because General Gorgas has done much wonderful work. President Bevan also referred to the health of the soldiers during mobilization, the venereal problem, drugs and chemicals, the health of the civil population, the problem of nurses, and also the reconstruction and re-education of the disabled men on their return. He showed by a careful study of the situation that the venereal problem is not so bad as is imagined by the public who read lay publications, and that the amount of venereal diseases has diminished very materially. In fact, the percentage of cases in the army is lower than among those in civil life. One very strong point made by him is the necessity of eliminating drink, and this evidently found favor with the press, because every paper referred to Dr. Bevan's idea that there should be a propaganda against drink as it is one of the nation's curses. He then spoke of the loyalty of the medical profession, and referred to our attitude toward the German medical profession.

The following morning, Wednesday, June 12, the meetings opened in the various sections, and from all accounts the section meetings were well attended, and a great many interesting papers were presented.

On Thursday the sections adjourned to attend a general meeting held in the Auditorium, to discuss the reconstruction and rehabilitation of the soldier. Here Col. Frank Billings, of Chicago, presided, and many speakers who came from the allied countries took part in the program and in the discussions. Evidently the pro-

gram in Washington is not completed yet as to what shall be done with the soldier on his return, but they have gone so far at least as to present plans and specifications and drawings for an enormous reconstruction hospital, which will be equipped with all the modern appliances known to surgery and all departments of medicine. It will have surgeons, orthopedists, internists, neurologists, teachers, and those versed in vocational work to supply its great demands. Other hospitals of similar type will be organized throughout the country if the plan goes through and sufficient money is appropriated. At present the work of reconstruction is carried on largely by private hospitals, and one or two exist in the East in which much good work has already been done, as in the Walter Reid Hospital, near Washington, and other hospitals in the East which are maintained by private individuals. The great question is, Who is going to direct the work of reconstruction and rehabilitation, the War Department or the vocational side of such an institution? The probabilities are that it will be wholly a military affair, and in order to fulfill its purposes it must of necessity be under the military authorities. If not, various small institutions will attempt to organize and carry out reconstruction departments, and the work will fail unless it is directed by Government officials. This is not to disparage in any way the work which is already done in various state institutions because they have probably begun, and carry on, a system which in itself is worthy of more consideration than is given it. We have them in the Northwest, and they are in all states where progress and red blood are the secret of success; but to carry on this work for returning soldiers it is necessary that a big organization be behind the project. There are thousands and thousands of willing workers who are anxious to be trained as teachers, and who will do anything to assist the Government in whatever department their services may be required. This, to our way of thinking, is the biggest coming feature of the medical and military problems of the war,—the care of the man who comes home and the necessity of securing his independence and his living by his own efforts.

One must not forget that Canada sent some very able men to speak at this all-day session. Mr. T. B. Kidner, Department of Soldiers' Civil Re-establishment, was on the Canadian Commission, and has the direction of all of the work of reconstruction or its allied branches. Major J. S. Todd, medical officer of the Pension Commis-

sioners in Canada, also spoke on the reconstruction problem. Dr. McMurtrie, of the Red Cross Institution for Cripples in New York, presented an able paper. His associate, Dr. C. A. Prosser, director of the Federal Board for Vocational Education in Washington, was unavoidably absent.

Men who are now on the general staff in Washington, also took part in the program, and presented many interesting points.

Let us digress a moment to comment on the method and the manners of the carrying voice of the speakers. It was painfully distressing to attempt to listen to men whom we knew and who have taken part in discussions for years, who, in the presence of this big audience and in a big hall, were unable to make themselves distinctly heard even at a short distance from the platform. Some of the men, of course, were not accustomed to such a large auditorium, and some were obliged to read from their manuscripts, which means bending the head and neck forward and throwing the voice from the desk only a few feet into the air. Other men had insufficient carrying voices, and were often indistinct in their utterances and articulation. One man, however, proved that any man could speak if he would really try, and that was Major M. J. Seelig, of St. Louis, who is on the staff of the Surgeon-General. He spoke of acute surgery as related to reconstruction, and his voice was perfectly clear, and every word was carefully and naturally enunciated, and he could be heard all over the house without an effort, either on the part of himself or his audience.

On the whole, the reconstruction day was a brilliant affair, and its papers will be read by the profession and the lay people with enthusiasm as soon as they are published.

Wednesday evening was devoted to a medical war meeting at Medinah Temple on the North Side. The Temple has an auditorium with 5,000 seats, and every seat was occupied. Very naturally, the new president presided, and introduced Surgeon-General Gorgas and Admiral William C. Braisted, Surgeon-General of the Navy. Then came the venerable Sir James MacKenzie of Great Britain, who spoke very briefly, but very much to the point, and elicited much applause by his kindly and comforting remarks to the American people. Sir Arbuthnot Lane, one of London's brilliant surgeons, with Sir James MacKenzie, came over to the meeting of the Association to represent the Government of Great Britain, and the audience found him a very en-

tertaining speaker, full of fire and life and knowledge, and with many interesting anecdotes. Col. Herbert Bruce, consulting surgeon from Canada in the British Armies in France, made a very telling address, and was much applauded for his clear explanation of methods inaugurated by the Canadian medical men. France was represented by M. Justin Godart, who spoke in French, but evidently a great many in the audience understood him because they seemed to applaud at the proper time. His address was very interesting. When Major Edouard Rist was introduced the audience was quite prepared for a typical Frenchman, but, instead of that, they heard a man who spoke in faultless English, and who made a great many hits by his forceful manner and evident interest in the situation that exists between France and America. When he said to the audience, "Your boys are as dear to us as our own boys," he made a hit with the mothers and fathers. Dr. René Sand, of Belgium, spoke very briefly, and simply thanked America for what she had done for the people of Belgium, and he poured out his affection and love by offering to them the heart of the Belgian people. President Ray Lyman Wilbur, of the Leland-Stanford Jr. University, talked on food conservation, and showed that he was well equipped with statistics, and he astonished a good many men who expected to hear a docile, quiet man, but instead found him transformed into energy and spirit, full of advice and with a thorough knowledge of his subject. The new president-elect, Major Alexander Lambert, M.R.C., U.S.A., who has done so much Red Cross work in France, was introduced. He spoke briefly of his observations and his desire to represent the medical profession through the American Medical Association.

Friday was devoted again to section work. The programs were completed on that day, and again much was heard of war papers dealing with concrete war subjects. A good many speakers who had had experience at the front told of their work, and what was needed by the medical men who were about to enlist in this country. During the day there was a meeting at the Studebaker Theater of men who addressed draft boards and medical reserve boards in which the new regulations were discussed and explained. They were told how and what to do, and what class of men are to be admitted into the service through the local and advisory boards.

Thursday evening there was a big patriotic meeting at the Auditorium addressed by laymen

and medical men. By this time the audiences were pretty well filled with medical topics, war topics, war progress, etc.; and when the Association adjourned, everyone felt that it had been a great success.

MISCELLANY

TEN-DAY CAMPAIGN FOR RED CROSS ENLISTMENT OF NURSES CONDUCT- ED BY TWIN CITY TRAINING- SCHOOL SUPERINTENDENTS RESULTS IN LARGE EN- ROLLMENT THROUGH- OUT THE STATE.

Four hundred graduate nurses in Minnesota have enlisted for war service with the American Red Cross during the ten-day recruiting campaign which opened June 3d. This is about one-third of the total number of registered nurses in the state. Considering the fact that there are many graduate registered nurses who have married or retired from professional activity, the number who now have volunteered for Red Cross service constitutes approximately 40 per cent of the active nursing forces of the state. This is considered a remarkable showing, and is held to be indisputable proof of the loyalty of the nursing profession and the patriotism fostered in all the hospital training-schools in the state. The nurses enlisted in this campaign agree to respond to call for active duty as needed from now on until January 1, 1919. In the meantime they are urged to remain at their civilian posts if engaged in institutional work; or to continue private nursing if engaged in the general practice of their profession.

Hospital training-schools are preparing to admit large classes of probationers who will train to take the places of those called to war service.

The recruiting campaign which resulted so successfully was planned by the superintendents of nurses of the various hospitals in the Twin Cities. A committee, including training-school officials and representatives of nurses' organizations, was appointed to work out details, and carry on a campaign throughout the State. Miss Lydia H. Keller, secretary of the State Board of Examiners of Nurses, was designated special recruiting officer to canvass the state outside of the Twin Cities. A questionnaire was formulated, and sent to every registered nurse in the state.

Through this it was ascertained which were available for enlistment, and a strong appeal was made to all who were so situated that they could enroll. As almost every graduate nurse has remunerative employment at the present time, the willingness with which they have voluntarily enlisted for Red Cross service demonstrates genuine patriotism and self-sacrifice. The energetic manner in which the campaign was planned and carried out, and the results attained are highly creditable to the training-schools and nursing profession in Minnesota.

A CITY OF PRIZE BABIES

One more step in the direction of making Minneapolis the city of prize babies was taken during the week of June 16 to 22, when the first community health week of Children's Year was held in the district around the Northeast Neighborhood House. For this inaugural week, the exhibit was stationed in the Holy Rosary school. It will be taken, in time, to each neighborhood of the city. The organizations backing this novel educational scheme, and providing the exhibit material, are the Woman's Council of National Defense, Anti-Tuberculosis Committee, Associated Charities, Jewish Associated Charities, Children's Protective Society, Visiting Nurses, and Infant Welfare Society.

The parade of 6,000 children, parents, and teachers, which celebrated the opening night, was headed by the great banner of crimson satin, lettered in white, which has just been received in token of Minnesota's record in the 1917 sale of Red Cross seals.

BOOK NOTICES

THE PRACTICAL MEDICINE SERIES. Volume IX, Skin and Venereal Diseases. Oliver S. Ormsby, M. D., and James H. Mitchell, M. D., Rush Medical School. The Year Book Publishers, Chicago, Ill., 1917. Price, \$1.50 per volume; price of series of ten volumes, \$10.00.

The current volume (X) of the Practical Medicine Series, covering a review of the more important contributions to current literature in the field of neurology and psychiatry, maintains the fine qualities of this admirable little work.

An excellent style and attractive readableness are among its best characteristics. The authors also possess the unusual ability to catch and present in brief and comprehensive form the real meat in the papers reviewed, thus saving for the busy man a large amount of time which would be required to read the entire articles.

The entire contents are important material, and the selection of individual subjects for comment is difficult, as all are of marked interest. Those on the neuroses, brain injuries, and types of insanity incident to the war, are very timely, and are from such men as Farrar, Buzzard, and Percy Smith, and may claim special attention. Material on the röntgenology of brain tumors by Halstead, Heuer, and Dandy, with illustrations, shows clearly the value of the skiagraph in this field. Papers by Byrom Bramwell and Crafts on multiple sclerosis set forth the striking characteristics of this often overlooked process; and Dercum offers a valuable study on the differentiation of the early pictures of dementia precox and manic-depressive insanity in the young, especially timely just now when so much attention is being given to the former.

—CRAFTS.

PRINCIPLES OF SURGICAL NURSING. A Guide to Modern Surgical Technic. By Frederick C. Warnshuis, M. D., F. A. C. S., Visiting Surgeon, Butterworth Hospital, Grand Rapids, Michigan; Chief Surgeon, Pere Marquette Railway. Octavo of 277 pages with 255 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$2.50 net.

Not often does one see a work which covers its subject in such a painstaking and thorough manner as this one does.

There is no confusing variety of procedures from which one may pick his choice, but, rather, one method is given which, "based on present-day surgical procedures, has proven reliable in the practice of numerous surgeons."

While intended primarily for nurses, yet the student, and especially the man doing only occasional surgery, will find much of value in its pages.

Beginning with the "Preparation of the Room and Its Equipment in a Private House," further chapters are devoted to "Methods of Hand Sterilization," "Preparation of the Patient," "Preparation of the Operative Field," "Duty of the Nurse during Operation," "Post-operative Nursing during First Twenty-four Hours," "Post-operative Care in Normal Convalescence," "Post-operative Emergencies," "The Process of Healing and Care of Wounds," "Anesthesia," "The Nurse's Chart in Surgical Cases," a chapter devoted to formulae (plasters, poultices, stupes, enemata, etc.), "Preparation of Surgical Materials," "Plaster-of-Paris Splints," and "Catheterization."

The illustrations are especially good, and their profusion adds immeasurably to the value of the work.

—AREY.

NEWS ITEMS

Dr. C. R. Ball, of St. Paul, has been commissioned captain in the M. R. C.

Dr. M. W. Smith, of Red Wing, has been given a captain's commission in the M. R. C., and is awaiting orders.

Dr. F. O. Gronvold, of Fargo, N. D., has withdrawn from the firm of Drs. Brown, Burton & Gronvold, of that city.

Dr. T. E. Flinn, of Redwood Falls, has received a captain's commission in the M. R. C., and is awaiting orders.

Drs. Frost and Jacobs, of Willmar, have closed the Bethesda Hospital of that city, as Dr. Jacobs has enlisted in M. R. C.

Dr. John A. Saari, of Eveleth, was married last month to Miss Allie Wiettenen, of Brooten. Lieut. Saari is now located at Camp Lee, Va.

The British military cross has been awarded to Lieut. A. I. Haskell, of Minneapolis, a graduate of the Medical School of the University, Class of 1917.

The Mayo Clinic Exhibit at the A. M. A. meeting was awarded a gold medal. The exhibit was divided into eighteen departments, and was very elaborate.

Short term intensive training-schools for nurses have been opened in a number of American colleges to be continued through the college vacation period.

Dr. B. F. Simon is now St. Paul's City Health Officer, succeeding Dr. Ohage, who resigned. Dr. Simon is a graduate of the Medical School of the University of Minnesota.

The South Dakota State Medical Association will abandon the assessment insurance defense plan, and contract with an indemnity company to insure its members at a reduced price.

Dr. Jerome Smersh, son of Dr. F. M. Smersh, of Owatonna, a 1917 graduate of the University of Minnesota Medical School, has been called to the Great Lakes Naval Training Station.

The corner-stone of the first reconstruction hospital to be built in America, was laid on June 15 in Boston. The hospital will cost \$250,000, and is the gift of the Elks of the United States.

The mother of Lieut. John P. Rosenwald, recently killed in France while rendering medical service to the wounded, has received a letter from General Pershing giving high praise to her son for his bravery.

The Feigh Hospital for Children, at Duluth, has cared for over fifty children since April 15. This is the great charitable institution donated to Duluth by a former citizen, as described in these columns some months ago.

Dr. A. G. Kessler, superintendent of the Otter Tail County Sanatorium, is taking post-graduate work at Saranac Lake, N. Y. Dr. Haugen, of Battle Lake is in charge of Dr. Kessler's work during the latter's absence.

The total registration of attendance at the

meeting of the A. M. A. in Chicago was 5,553. The registration of states showed 151 from Minnesota, 25 from South Dakota, 20 from North Dakota, and 19 from Montana.

The Medical School of the University of Minnesota has decided that a proposed speeding-up plan for medical instruction in its summer school cannot be carried out except at the expense of thoroughness in work, and the plan has been abandoned.

Dr. A. L. Kusske, formerly of Hutchinson, who recently completed a year's service as resident house surgeon in the Illinois Charitable Eye and Ear Infirmary has located in Minneapolis, and will limit his practice to eye, ear, nose and throat work. Dr. Kusske has offices in the P. & S. Building.

The Minnesota Hospital Association is holding its annual meeting in Minneapolis as this issue of THE JOURNAL-LANCET goes to press. The new association gives promise of a very useful career, because it will discuss the practical work of the hospital, and its membership comprises all the leading hospital superintendents in the state.

An army training-school for nurses is to be established at Fort Snelling, and at the St. Paul (Midway) aviation training camp. The plan is to ask girls in the regular hospital training-schools to join these army training-schools, and thus complete their courses in army work. The wife of Dr. H. P. Ritchie, of St. Paul, is a leader in the movement.

The free clinics for the treatment of children who have had infantile paralysis, now being conducted by the Minnesota State Board of Health throughout the state, are of untold value, and are largely attended. Clinics will be held in Mankato on July 2, 3, and 5; in Worthington on July 8 and 9; in Tracy on July 10 and 11; in Granite Falls on July 12 and 13. Examinations are made and the proper treatment, for the parents and nurse to carry out, is outlined.

The North Dakota State Medical Association held its annual meeting in Fargo last week. The following officers were elected for the current year: President, Dr. E. A. Pray, Valley City; first vice-president, Dr. W. B. Baldwin, Casselton; second vice-president, Dr. Fred E. Ewing, Kenmare; third vice-president, Dr. H. C. French, University; secretary, Dr. H. J. Rowe, Casselton; treasurer, Dr. W. F. Sihler, Devils Lake; delegate to the A. M. A., Dr. Charles MacLachlan, New Rockford; alternate, Dr. F. W. MacManus, Williston.

RECENT NEW ASSIGNMENTS OF NORTH-
WESTERN MEDICAL OFFICERS*Minnesota—*

To Camp Colt, Pa., Lt. R. H. Jones, Minneapolis.
 To Camp Dodge, Iowa, Lt. F. H. Knapp, St. Paul.
 To Fort Oglethorpe, Ga., Lt. Harry Oerting, Minneapolis.
 To New Haven, Conn., Capt. G. W. Beach, State Sanatorium.
 To Portland, Oregon: Lt. J. W. LeClare, Le Sueur.
 To New York City (Rockefeller Institute): Lt. L. H. Redelings, Rochester.
 To Camp Sevier, S. C.: Capt. B. A. Camp, Allert Lea.
 To Mincola, N. Y.: Lt. P. B. Gillespie, Minneapolis.
 To New York City (Bellevue): Lt. L. E. Lopper, Rochester.
 To Walter Reid Hospital, D. C.: Capt. E. M. Jones, St. Paul.

Montana—

To Camp Lewis, Wash.: Lt. C. A. Gardner, Columbus.
 To Fort Riley, Kas.: Lt. H. H. Judd, Bozeman.
 To San Francisco, Calif.: Lt. J. L. Tracey, Helena.
 To Hoboken, N. J.: Lt. E. F. Brindjoine, Butte;
 Lt. T. B. Scott, Butte.
 To Camp Gordon, Ga.: A. N. J. Dolan, Great Falls.

North Dakota—

To various camps for conference and instruction:
 Major F. H. Bailey, Fargo.

To Camp Gordon, Ga.: Lt. W. D. Bayard, Fargo.

South Dakota—

To Camp Travis, Texas: Lt. A. P. Kimball, Colone;
 Lt. G. J. Long, Oldham.
 To San Francisco, Calif.: Capt. A. C. Allen, Deadwood.

To Fort Riley, Kas.: Capt. R. M. Malster, Carter.

TRANSFERS

MINNESOTA OFFICERS

Lt. J. C. Michael, St. Paul, from Fort Riley, Kas., to Camp Greene, N. C.
 Lt. W. F. Maertz, New Prague, from Camp Grant, Ill., to Camp Laurel, Md.
 Lt. J. A. Saari, Eveleth, from Chicago to Camp Lee, Va.
 Lt. J. R. McVay, Rochester, from Fort Riley, Kas., to Camp Lee, Va.
 Capt. T. G. Clement, Vernon Center, from Camp Shelby to Camp Lewis, Wash.
 Lt. M. F. Smith, St. Paul, from Army Medical School to Camp Meade, Md.
 Lt. Joseph Moses, Jr., Northfield, from Fort Riley, Kas., to Camp Pike, Ark.
 Lt. Carl Paulson, Minneapolis, from Chicago to Camp Sevier, S. C.
 Lt. G. C. Black, Minneapolis, from Memphis, Tenn., to Fort Oglethorpe, Ga.
 Lt. P. C. Bjornshy, Bagley, from Pullman, Ill., to Fort Riley, Kas.
 Lt. L. W. Pollock, Rochester, from Fort Riley, Kas., to New Haven, Conn.
 Capt. R. J. Sewall, Crosby, from Camp Kearney, Calif., to Philippine Islands.
 Capt. W. D. Brodie, St. Paul, from Camp Dodge, Iowa, to Chicago (Presbyterian Hospital).

Lt. Guy Brelsford, State Sanatorium, from New Haven, Conn., to Fort Thomas, Ky.

Capt. F. J. Savage, St. Paul, from Camp Custer, Mich., to Hoboken, N. J.

Capt. H. H. Sellers, Minneapolis, from Fort Riley, Kas., to Hoboken, N. J.

Capt. J. S. Macnie, Minneapolis, from Fort Riley, Kas., to Hoboken, N. J.

Lt. F. N. Bjerken, Red Wing, from Camp Pike, Ark., to New Orleans (Charity Hospital).

Lt. J. M. Neal, Minneapolis, from Fort Oglethorpe, Ga., to Pittsburgh, Pa.

Lt. S. R. Fraker, Cass Lake, from Houston, Texas, to San Antonio, Texas.

Lt. A. E. Johann, Minneapolis, from Camp Beau-regard, La., to Washington, D. C.

Capt. E. S. Ingersoll, Rochester, from Mineola, N. Y., to Wichita Falls, Texas.

Capt. J. W. Lee, Minneapolis, from Camp Colt, Pa., to Camp Meade, Md.

Lt. L. M. Keene, Alexandria, from Fort Riley, Kas., to Jefferson Barracks, Mo.

MONTANA OFFICERS

Lt. Herbert Hayward, Darby, from Camp Grant, Ill., to Fort Snelling, Minn.

Lt. A. K. Resner, Ronan, to report to Western Department by wire for duty.

Capt. G. B. Owen, Polson, from Camp Grant, Ill., to Camp A. A. Humphreys, Va.

Lt. W. E. Long, Anaconda, from Camp Grant, Ill., to Camp Doniphan, Okla.

Lt. F. L. Arnold, Billings, from Blacksburg, Va., to Hoboken, N. J.

Lt. R. L. Reynolds, Kalispell, from Camp Bowie, Texas, to Hoboken, N. J.

Capt. G. J. Putney, Great Falls, from Fort Riley, Kas., to Hoboken, N. J.

Lt. J. R. Soltero, Belgrade, from Fort Riley, Kas., to Fort Ontario, N. Y.

NORTH DAKOTA OFFICERS

Lt. J. A. Johnson, Jr., Grand Forks, from Fort Oglethorpe, Ga., to Camp Gordon, Ga.

Capt. R. D. Campbell, Jefferson Barracks, Mo., to Camp Grant, Ill.

Lt. W. E. Maertz, Lidgerwood, from Camp Grant, Ill., to Camp Laurel, Md.

Lt. H. J. Fortin, Fargo, from Philadelphia, Pa., to Camp Meade, Md.

Lt. G. S. Frogner, Parshall, from Fort Riley, Kas., to Pittsburgh, Pa. (Carnegie Institute).

SOUTH DAKOTA OFFICERS

Lt. C. N. Harris, Wilnot, from Camp Taylor, Ky., to Milwaukee, Wis.

Lt. H. D. Newby, from Camp Greene, N. C., to Portland, Ore.

PARTNERSHIP WANTED

A physician of ability and excellent standing in his community, with eight years of large general practice, desires association with a busy physician and surgeon. Age 33; perfect health; married; draft exempt. Am willing to take special course as occasion requires. Very best references. Have preference for internal medicine and for the Middle West. Address 139, care of this office.

For Circumcision

we offer a special catgut suture not only particularly suitable for the purpose, but one that is exceptionally convenient and safe.



Sizes 00 and 0, Three Tubes in a Box. Price, 25 cents per tube.
No samples.

OBTAINABLE FROM YOUR DEALER

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

"Sick Headache"

—and other headaches—

are usually relieved more or less promptly as you remove their cause. In the meantime—

K-Y ANALGESIC

locally "rubbed in," will usually afford comfort without blistering or soiling.

Gives Nature's Corrective Forces a Chance

*No fat or grease. Samples and literature on request.
Water-soluble. Collapsible tubes, druggists, 50c.*



Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Chafing, Sunburn, Prickly Heat

—and similar afflictions—
are promptly relieved by

K-Y Lubricating Jelly.

Applied liberally to irritated or inflamed areas, the pronounced cooling and soothing action of this effective local remedy is at once manifest.



Water-soluble; non-greasy; "smells nice".
Collapsible tubes at Druggists.

Samples and literature to physicians only.

K-Y Lubricating Jelly

"Stops the itch
without greasing the linen."

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Paraffin Treatment of Burns

is successfully applied
by the use of

REDINTOL

Made from carefully selected ingredients of the highest quality, and combined in proportions to insure the most satisfactory results, Redintol makes possible the ready application of the newest and most effective method of treating burns, even of the most severe degree.

Redintol is a plastic and elastic dressing which forms an occlusive, non-adhering covering to the injured area. It can be applied with practically no pain and affords immediate relief from burning and smarting.

Redintol promotes rapid healing, with minimum scarring and lessened contractions of the skin or tendons.

Redintol is supplied in individual packets, ready for immediate application.

Sample and Full Directions on Request.

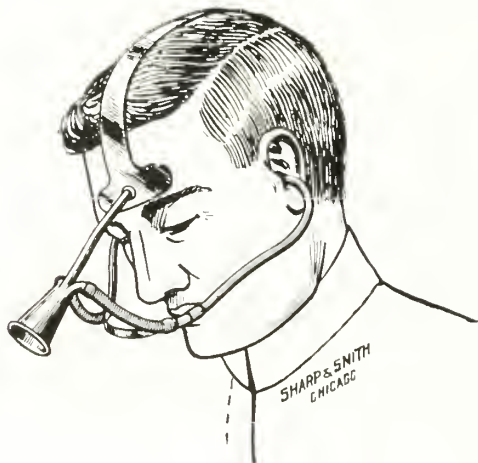
Johnson & Johnson

New Brunswick, N. J.

U. S. A.

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones. After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

65 East Lake St. - - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aenarobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.

5 S. Wabash Ave.

ST. LOUIS, MO.

4485 Olive St.—Corner Taylor

NEW YORK, N. Y.

18 E. 41st St.

PUBLISHER'S DEPARTMENT

HORMOTONE

Hormotone is a dynamogenic hormone tonic, put up in tablet form, which is highly recommended in neurasthenia and all asthenic conditions, especially in the weaknesses of advancing old age and for the menstrual disorders preceding the climacteric. It is particularly indicated in neurasthenia associated with high blood-pressure.

It is manufactured by the G. W. Carnrick Co., the well-known chemists, who have given the medical profession some of its most highly scientific and valuable remedies.

MUDLAVIA

Mudlavia, at Kramer, Ind., conducted by Dr. George F. Butler, as medical director, and W. C. Kramer, as general manager, is a great institution, as a perusal of the "Mudlavia Blue Book for Physicians" readily shows. It is to be commended for its hearty co-operation with physicians, and its preference for patients sent by physicians with specific information concerning such patients, so that the wishes of the family physician may be carried out.

Physicians who have patients that are almost certain to be benefited by the Mudlavia treatment will do well to correspond with Dr. Butler, from whom they will get valuable and wholly dependable information.

WE ARE PROUD OF THEM

The Standard Medical Supply Company of Minneapolis, instead of bemoaning the loss of thirteen of its best men in the war, is using its advertising space in our columns to announce its pride in the fact that it has "thirteen" good and true men to give to the service. Such is the spirit of all true Americans, and its publication heartens other employers of men to rejoice in their loss, and the country's gain.

War has come closer to the medical profession than to any other professional group of men, and no service abroad is too great for medical men to undertake when a greater service at home does not command them.

The Standard Company can still take care of its rapidly growing business, and serve the medical men at home.

THE EFFECTIVE TREATMENT OF BURNS

The conspicuous results obtained with the paraffin treatment in France have created a demand for a dependable preparation in this country. Accordingly, Redintol has been prepared and placed at the service of American physicians.

Applied according to directions Redintol promptly relieves burning and smarting. Healing proceeds rapidly with the great advantage that scarring and contractions are reduced to a minimum. Redintol, therefore, opens up new and far-reaching possibilities in the treatment of burns, and enables the practitioner to accomplish results that he has rarely if ever been able to obtain with the other measures at his command.

Samples and full directions to physicians on request to Johnson & Johnson, New Brunswick, N. J.

QUICK SERVICE IN LABORATORY WORK

The modern public laboratory can now serve every physician within three or four hundred miles of it about as quickly as he would be served by his own private laboratory. For instance, if a pathological tissue or a secretion is mailed, say, at 6 P. M., three hundred miles from the Beebe Laboratory in St. Paul, a report upon it can be made early the following day by telegraph or telephone; and in most instances such an examination can be made, and the full report put into the hands of the physician, without resort to the telegraph or telephone, the next day.

The physician who does not make use of such means of diagnosis is well-nigh a "back number," doing justice to neither himself nor his patients.

The Beebe Laboratories, of St. Paul, invite correspondence from physicians who may desire to know more of laboratory methods and service.

BETHESDA HOSPITAL, ST. PAUL

Bethesda Hospital of St. Paul, in its architectural features and in its management, is very much like the modern moderate-priced hotel. It is constructed and managed as a hospital, pure and simple. It is not a luxurious stopping-place, with spacious corridors, parlors, and rooms, all gaudily decorated and furnished, exhibiting bad taste everywhere one turns; but it is designed and equipped throughout to meet the needs of sick people. At every point good taste is exhibited, and sanitary requirements are met. The environment of the patient is restful, the atmosphere seems restorative, and contact with every attendant is pleasant.

Such conditions obtain in Bethesda Hospital, and no patient leaves it without a feeling of attachment to it and admiration for its work.

The Rev. J. A. Kranz, D.D., is its superintendent, and its corps of physicians are men of the highest standing in the St. Paul profession.

A VERITABLE PROP

After the subsidence of the acute symptoms of any serious febrile disease, an examination of the blood will almost always reveal a degree of anemia in direct proportion to the severity and duration of the primary disease. It is thus always desirable in such cases to adopt measures to revive, restore and reconstruct, and with this object in view one should begin at the foundation, i. e., the blood itself. To construct new red cells, and reconstruct those which have become dehemoglobinized by disease, nothing is more potent in effect than Pepto-Mangan (Gude). This standard preparation of organic iron and manganese supplies the vital fluid with the elements needed to reconstruct and restore its oxygen carrying capacity, by contributing the necessary hemoglobin. Pepto-Mangan is palatable, absorbable, and promptly assimilable. It encourages the appetite, without disturbing digestion or causing constipation.

REST HOSPITAL

Rest Hospital is situated in one of the best residential districts of Minneapolis, 2527 Second Avenue South, and has been conducted for many years by Miss Delia O'Connell, R. N., whose management has been so satisfactory as to gain for the hospital the patients of not

a few of the best physicians of the city, and to attract the patients of the same grade of men from the country. While the rates of Rest Hospital are moderate, they are high enough to give its patrons all the comforts and advantages of a first-class private hospital.

Whoever comes into professional contact with Miss O'Connell will recognize her efficiency as a hospital superintendent, and will appreciate the geniality of her personality, which is so helpful to all patients. No mental cases are taken into this hospital.

Miss O'Connell will furnish full information upon any point desired by physicians, and also references to the best practitioners in Minneapolis.

THE NORTHWESTERN HOSPITAL, MINNEAPOLIS

The Northwestern Hospital of Minneapolis is under the general supervision of a large staff of the city's best-known philanthropic women, who have made possible its extensive and well-equipped buildings, which have cost a large amount of money, and who have brought into the hospital life the home life as made by women. But all this of itself does not make a hospital, but may unmake the best equipped one. These women have manifested a high degree of executive ability in obtaining a very able staff of men, in all the hospital's departments, and in giving the medical staff an absolutely free hand in the staff's work. This is the secret of the large success attained by the Northwestern Hospital, known throughout the Northwest as an institution of the highest rank; an A-plus hospital, doing its full share of charitable work, caring for those of moderate means, and furnishing the rich all the luxuries that they are entitled to in a hospital that is not a purely private money-making enterprise.

HIGH-GRADE SURGICAL INSTRUMENTS AND HOSPITAL SUPPLIES

Wherever a surgeon or a physician purchases his instruments and office or hospital mechanical supplies, it is profitable for him to know the high-grade manufacturers and to be familiar with their output and their descriptive matter of what they manufacture or import.

Messrs. Sharp & Smith (new location, 65 E. Lake Street), Chicago, is a firm whose acquaintance is worth while. Their business was established in 1844, and their reputation for the fairest and most honorable dealing has never been sullied; and, after all is said, a firm's reputation is the only guarantee that is to be depended upon at all times. For instance, the De Lee-Hillis stethoscope, which they describe in their announcement on another page, is a very valuable and low-cost instrument which any physician should have if what they say of it is true. Are their statements about their stethoscope true? The certain answer is, Their reputation proves it.

Their descriptive matter of this and other instruments, that is, their catalogue, should be in the hands of all physicians and surgeons.

THE POTTENGER SANATORIUM

People, even medical men, are prone to consider the climate of a locality as a good winter or good summer climate, and to send their patients to one place in the summer and to another place in the winter, and to do so even when a patient may be obliged to remain in one

climate the year round. Of course, California is put down by the thoughtless as having a good winter climate, to which the consumptive should be sent for the winter season only.

All this is true only in a measure. Back in the foot-hills of the mountains of California lies Monrovia, a short (forty-five minutes) ride from Los Angeles, and here is the Pottenger Sanatorium for the treatment of diseases of the lungs and throat. Here is a climate, almost ideal from the health standpoint, for healthful conditions do not demand a stationary condition as to humidity, temperature, sunshine, etc., day and night, month in and month out; and the place that possesses such conditions is not a good place for man to live.

Monrovia is in the foot-hills, with beautiful mountain scenery, and near enough to the ocean to get all its benefits with none of its disadvantages, such as low altitude, too great humidity, etc.

In addition to a well-nigh ideal environment in the above respect, this sanatorium has all the advantages of home life and surroundings; and, in addition to all this, it offers an unsurpassed scientific treatment at the hands of men with a world-wide reputation in the treatment of tuberculosis.

Full information of the work done at Monrovia can be obtained from the Los Angeles office in the Titla Insurance Building in Los Angeles or from the Sanatorium at Monrovia.

ARMOUR & CO. ANNOUNCE NEW PRODUCT: THROMBOPLASTIN SOLUTION

Thromboplastin Solution (Armour) is a specific hemostatic, made exclusively from brain tissue of cattle. In the usual routine of the abattoir, the animals are stunned by a blow on the head, which produces immediate unconsciousness. This process, however, causes considerable injuries to the brain tissues, with consequent severe cerebral hemorrhage and formation of blood-clots, which are difficult to remove. This procedure, therefore, renders the commercial cattle brains undesirable for the manufacture of thromboplastin preparations. The material employed in Armour's Thromboplastin Solution is selected from cattle slaughtered without injury to the brains. The brain tissues are removed immediately after the brains are bled, and carefully trimmed, washed, and cleaned. From this raw material an isotonic solution is made containing the hemostatic principles in active and stable form. The solution is standardized physiologically on oxalated blood plasma, and guaranteed to be of full therapeutic strength if used within the time limit stamped on each package.

Thromboplastin Solution is useful when applied locally in the treatment of hemorrhage and especially hemorrhage from oozing surfaces, scar tissue, and nose, and in surgery of the bones, glands, nose and throat. It has proved of value in checking gastric as well as rectal hemorrhage. Thromboplastin Solution is considered an excellent hemostatic in true hemophilia. In certain cases of dental surgery, when direct application does not check the hemorrhage, the Thromboplastin Solution may be boiled and injected into the site of the bleeding. Thromboplastin Solution should be stored in a cool dark place. Thromboplastin Solution may be sprayed on the bleeding surface or applied directly by means of gauze or cotton.

THE JOURNAL-~~L~~ANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, JULY 15, 1918

No. 14

FRACTURES OF THE SKULL*

By F. E. CLOUGH, M.D., F.A.C.S.

Chief Surgeon, Homestake Mining Company

LEAD, SOUTH DAKOTA

This paper is based on a series of fifty consecutive cases of fracture of the skull, which occurred in the service of the Homestake Hospital at Lead, South Dakota. All patients who survived the injury sufficiently long to reach the hospital alive, are included in this report, so that a very fair record of complications and final results is given.

We have nothing new to present, but wish merely to restate facts which have been forgotten or overlooked by the practitioner seeing few of these cases. It must also be stated that these cases occurred in civil or mining practice, and that none of the new war technic has been deemed necessary in handling this group.

What were the causative agents in this series? The great majority of the injuries were caused by falling rock or by foreign bodies flying from a blast, while a few were due to falls from buildings, or to auto accidents, or to birth injuries. In several cases the fatal result was partially brought about, or at least hastened, by associated injuries.

The injury in the youngest patient happened at birth, when the parietal bone was dented by forceps, while the oldest patient was but fifty-seven. It is rather peculiar that in our mountainous region, with steep hills, icy sidewalks, and slippery steps, not a single case occurred from one's feet slipping, and striking the head on the cement walk or frozen ground.

Location of injuries,---

Vault	34
Base	16

Total 50

Anatomic Location in the Vault,---

Frontal bones	8
Parietal bones	21
Temporal bones	1
Occipital bones	4

Total 34

Lateral Distribution in Vault,---

Right side	23
Left side	7
Both sides	4

Total 34

Why, in this series of 34 consecutive cases, 23 should have affected the right side, is difficult to explain. The only theory offered me by experienced miners is that a right-handed man naturally dodges to the left, which would throw the right side of the head uppermost, and therefore in the most dangerous position. It was impossible to determine whether all right-sided injuries happened in right-handed individuals.

Symptoms.—I want especially to emphasize this point: If you diagnose as vault fractures only those cases showing cerebral symptoms, then you will overlook at least three-fourths of the

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

cases of vault fractures. Time and again a miner, having received an apparently insignificant scalp wound, has walked unattended from a thousand feet underground to our hospital half a mile away, and on examination there has been found a large, depressed, comminuted fracture with perhaps laceration of brain tissue, and yet showing no cerebral symptoms. Indeed, it has been our experience, that, unless the depression is over the motor area, causing convulsions or paralysis, or over the occipital lobe, causing eye symptoms, skull fractures are silent.

Basal fractures practically always show cerebral symptoms, as evidenced by unconsciousness, or retardation of cerebral function. Practically every basal fracture is compound, opening either into the nose, ears, orbital cavity, or pharynx. Frequently large quantities of cerebrospinal fluid will escape either from the ears or nose. It is a mooted question whether the escape of blood from the ears is always indicative of basal fracture. My personal opinion is that it is associated with fracture in practically every instance.

One of the most dangerous symptoms which appear in these cases is that of cerebral anemia, which is due to an increased intracranial pressure, and which has been well worked out experimentally by Harvey Cushing. Sieber, of Pittsburgh, recently worked out a symptom syndrome covering this point. If, after a head injury, the blood-pressure begins to rise, and at the same time the pulse slows down, it is positive evidence that cerebral anemia is taking place, which, according to his statement, must be quickly relieved by decompression, in order to prevent irremediable damage. He advises an hourly record of blood-pressure and pulse-readings from the time of injury.

In connection with injuries to the head, with or without a fracture, the question of concussion or hemorrhage must always be considered. In this differentiation there is one point almost pathognomonic: Never diagnose a case of concussion unless the patient becomes immediately unconscious, for, if unconsciousness is delayed, or if there be a short lucid interval between primary unconsciousness and that which develops later, it is quite certain that intracranial pressure is increasing from a bleeding vessel, usually the middle meningeal. Even after apparent recovery, there is a possibility of increased pressure from retained cerebrospinal fluid. Usually it is relatively easy to make a diagnosis of fracture of the base, for the symptoms are always pronounced and the condition critical.

Complications.—These were relatively few, but very interesting. A short clinical record of these cases is added to this paper.

Prognosis.—Vault: Recovered 29, or 85 per cent; died 5, or 15 per cent.

Base: Recovered 7, or 43 per cent; died 9, or 57 per cent.

From this series one can point out that the first nine hours constitute a danger zone for these cases, and that, once that period is passed, the chances for recovery are extremely good. During this nine-hour period every fatal vault fracture and six of the nine fatal base fractures resulted in death. Of the three later deaths amongst the base fractures, one patient died at the end of three days from shock, the second developed a meningitis on the fifth day and died six days later, and the third died nineteen days after the injury, and I was unable to find the records of this case.

From this series it can be readily seen that vault fractures in themselves are not necessarily serious injuries, as the great majority of these patients recover under proper treatment. Indeed, in our mining work, we consider the ordinary, uncomplicated depressed fracture of the vault as worthy of but little worry or concern.

On the other hand, basal fractures constitute one of the most serious lesions with which we have to deal. Given an undoubted case with loss of consciousness, with the escape of blood or cerebrospinal fluid from the nose or ears, with a pulse above normal, and more or less symptoms of shock, the outlook is extremely grave. It is that type of case in which a most guarded prognosis should be given.

Treatment.—Never close a scalp wound until you are absolutely positive there is no depressed fracture beneath. If necessary, enlarge the wound and feel with the end of the finger, which is a far safer guide than any type of probe.

In the region of the forehead, especially, and occasionally in other regions, a fall on a flat surface will produce a circumscribed area of edema, in the center of which will be an apparent depression, which is most difficult to distinguish from a true depression. Never give yourself the benefit of the doubt, but reserve that right for the patient, and therefore cut down and determine accurately. It is far better for a patient to have a small scar in a conspicuous place than to have a serious lesion develop later through your own lack of thoroughness.

It has been our policy to operate on all depressed fractures as soon as seen unless the gen-

eral condition of the patient does not warrant such procedure. Owing to the lack of perfect cerebral control, it is frequently possible to finish the entire operation with little or no anesthetic. Ether is always used for general anesthetic purposes, as chloroform has been banished from our service.

We have made it a rule to remove all pieces that are completely detached, instead of laying them back on the dura, as has been advocated by some surgeons. Usually it is possible to chisel off an overhanging edge of solid bone, slip an elevator beneath the depressed parts, and slowly raise the fragments into position without breaking them entirely loose. It has been our experience that the fracture of the inner table is generally greater than that of the outer layer.

How much bone can be safely removed? We have, on several occasions, left a hole one and a half by two and a half inches, and covered the place with only the normal layers of the scalp. The chance of receiving a second injury in exactly the same spot is too remote to be taken seriously. Never, in our experience, has any miner received a second skull fracture in the same place. We have not made it a habit to cover the largest defects with the old-fashioned silver plate, or with its up-to-date relative, the autogenous graft taken from the fascia lata.

In one of the parietal depressions occurring in a baby at birth, and which produced no cerebral symptoms, we drilled a small hole through the center of the depression, inserted a heavy crochet-hook in the hole, and by traction popped this depression up, in the same manner as the bottom of an oil can returns to its normal position after having been pressed upon.

Hemorrhage from the diploë or larger vessels is often troublesome, but never dangerous, even though the longitudinal sinus is involved. It can always be controlled by firm packing with a gauze strip. It has never been our custom to open the dura beneath a fracture to examine the brain, although occasionally we have done so. It does not do any damage, nor does it increase the risk of infection. We have made use of no special technic for cleanliness, for the skull and dura seem able to cope with a moderate amount of infection. Once in a while a little infection will develop in the skin, but clears up readily. Owing to the amount of dirt in the hair we wash the injured part with soap and water, and then paint with tincture of iodine. A sterile towel with a small slit in it, is a most satisfactory adjunct to clean scalp-surgery.

Basal fractures offer little in the way of treatment. Our less seriously injured patients recovered without any treatment, while the severe ones were too far gone to do anything for them. It has been suggested that all these patients be given spinal punctures every few hours to lower tension, or that a temporal decompression be performed as soon as signs of cerebral anemia appear. Owing to the critical condition in case of the severe lesions, we have never resorted to either of these methods in that type, and have never deemed it necessary in the milder cases.

We have limited our treatment of basal fractures to combating the primary shock which overwhelms this type of case. I am frank to confess that in none of the non-fatal cases did the patient recover because of any specific line of treatment, but did recover because the cerebral damage was not sufficient to produce death.

What have been the final results? There has not been a single patient showing any permanent after-effect, either in the form of Jacksonian epilepsy, mental impairment, or permanent paralysis of any of the cranial nerves.

CASE-HISTORIES ILLUSTRATING DIFFERENT POINTS

1. *Hemorrhage*.—T. C. Hit by the binding-pole on a load of timber. No scalp wound; had been unconscious two days when first seen; had had a short lucid interval after the accident; left arm paralyzed; right eyelid drooping; right eye not reacting to light.

Operation.—Trephined, and found large clot from the right middle meningeal artery; removed the clot; patient conscious in two hours.

2. *Pressure with Convulsions*.—F. B. Large depression on top of the head involving the back end of both parietals. No loss of consciousness. While waiting a few minutes for operation, the patient had two very severe general convulsions.

Operation.—Removed one-half by one and a half inches of bone, and raised several large fragments. No dural involvement. Immediate recovery with no further convulsions.

3. *Late Pressure with Convulsions*.—S. M. Depression the size of a dime in the right frontal region at the hair-line; no cerebral symptoms.

Operation.—Bone immediately raised; no apparent injury beneath. The patient was discharged from the hospital on the tenth day. While walking home he had an epileptic fit, and a second one in a few minutes. Was re-admitted to hospital. Until our return, four hours later, he had thirty epileptiform convulsions, always beginning on the right side of the face and left side of the body.

Second Operation.—No adhesions of dura. Upon opening the dura considerable cerebral fluid squirted out under strong pressure, which we presumed accounted for the cerebral irritation. Uneventful recovery, and the patient is now with our troops in France.

4. *Basal Fracture with Staggering*.—G. C. Found

in mine unconscious; presumably had been hit by falling rock. In shock, semiconscious, vomited blood, double vision, no hearing in left ear. Patient finally recovered. Upon endeavoring to walk had most pronounced staggering gait, so that it was impossible for him to keep on the sidewalk. Acted exactly like an intoxicated man. We decided the fracture had involved the semicircular canals.

He was finally sent to a very prominent otologist. As he staggered down the corridor to see this doctor, he suddenly regained his equilibrium and remained all right for several days. The staggering then returned slightly at intervals. He returned home, and was given light work above ground. Within two hours he was staggering so badly that two men could hardly take him home. He finally recovered, and has had no recurrence for two years. This case was diagnosed as an hysteria simulating involvement of the semicircular canals. It was one of the most interesting cases we ever had.

5. *Cerebral Irritation Simulating Pressure*.—J. M., aged 10. While running down hill at supper time he fell striking on his forehead. Had the form of edema which is so hard to distinguish from true depression. At first he was dazed, but inside of an hour he was almost totally unconscious. He was operated on, and found to have no fracture. He regained consciousness in eight hours, and was all right the next morning.

6. *Forehead Edema with Fracture*.—A. B. A lacerated wound over the right superciliary ridge. Probed; no fracture found. Had a pronounced edema simulating fracture, but, owing to first examination, we decided no fracture was present. He kept having headaches and feeling badly. Three months after injury he was operated on, and a depressed fracture of both anterior and posterior layers of the frontal sinus was found. He still complained of headaches, and then developed digestive disturbances and various other troubles pointing to a neurosis. He finally left the country, but has been working ever since.

DISCUSSION

DR. F. V. WHITE (Yankton): I have been very much interested in this paper, and it is of special interest to me. I hardly feel competent to discuss the paper as it was given, but I am much interested in the after-effects of injuries to the skull, and what I shall have to say will be largely along that line.

First of all, I think it can be generally said that mental symptoms, or true mental disease, following injury to the skull, is a very unusual thing. As the doctor has said, most cases of injury, particularly to the vault of the skull, recover, and recover completely. Injuries to the base of the skull show one of two things: Either the patient dies or he makes a recovery, and the recovery is usually complete, but there are some cases in which there is an after-effect more or less permanent.

I was particularly interested in what Dr. Clough said about concussion. In concussion the degree of unconsciousness will, of course, vary directly as the degree of violence to the cranial contents; and, if there is no gross lesion, the patient of course usually reacts as you know, within a few hours, and consciousness is regained generally within a twenty-four hour period. But it sometimes happens that in injuries to the skull which result in concussion, there is actual damage to the cranial contents, as the meninges and the blood-vessels,

or even to the brain substance itself. In the case of the membrane and the vessels we usually have to do with contusions or minute and frequently multiple hemorrhages. If the injury is to the brain structure itself, we have to do with other changes, which are perhaps less understood, but are of a different character; and it is to be expected that in such conditions as that the symptoms will be more or less permanent, sometimes lasting for a few days, sometimes lasting for a few weeks, and, in extreme cases, lasting for months and years, and maybe the recovery is not entirely complete.

There is still another class of cases which follow injuries, to which I want to call attention, and that is after an injury to the central nervous system. The patient is apparently all right for a few days. He seems to have entirely recovered from the shock of the injury, and apparently is well, but within a few days he develops mild confusion or sometimes he may develop an intense delirium. Undoubtedly, these cases are of an inflammatory nature, involving the meninges or the brain substance, and there is a meningitis or an encephalitis, and the degree and extent of this condition determine how marked and permanent the results will be.

But in other cases following the injury we note after a while that there develops a certain amount of mental dullness or stupidity, and of this dullness there are all grades, resembling in some cases congenital imbecile states, and in others progressing to a complete and true dementia.

There is still another class of cases, and that is this: Following an injury there develops the very distressing state of epilepsy, and, unfortunately, in many cases there are no definite signs of any lesion, any destructive lesion, to the brain substance. The x-ray does not show that there is any depression. That would be true of course particularly if the depression had been elevated. Oftentimes there are hemorrhages, the seat of which is most liable to be in the tips of the temporal lobe and in the interior surface of the frontal lobes. These are the cases which develop their first convulsion only after a very long time, sometimes after a year.

DR. B. A. BOBB (Mitchell): There is one point that I want to emphasize, of which the doctor spoke, and that is the absence, which is so frequent, of meningitis following an extensive skull fracture, especially of the vault. My practice—I do not know whether it is right or not—is, where there are a larger fracture and depression, upon relief of the depression and the raising of the skull, to put in drainage, and, as the doctor said, not to put back the bone, especially if it is splintered a good deal; and I have left an open space, which perhaps would be criticized because of the fact that there might be a brain hernia. I have not had that result follow, and I have always put in a gauze drain. I have thought it lessened the danger of meningitis. I believe that is a good point, and I believe that the Dr. Clough's practice, not always to put back the button where a trephine is done, is perfectly warrantable and all right, because I see these men are now admitted into the war service.

DR. M. C. JOHNSON (Aberdeen): While my experience has not been large, I have had two or three cases which are very interesting, and which emphasize further the remarks of Dr. Clough as regards the severity of symptoms following severe fracture.

In one case I have in mind there was a fracture both

of the vault and of the base. There was a fracture extending into the frontal sinus and into the ear, as well as a severe fracture of the vault, which opened into the longitudinal sinus and caused a great deal of hemorrhage. When the patient was picked up he was comatose and nearly dead, and he was operated on without any anesthetic. He made a complete recovery, without any infection and without any involvement of the meninges. In this case the patient had all the chance in the world to get infection through the frontal nasal sinus and through the ear, but there was no infection.

As to the permanent results following depressed fractures: Of course, Dr. Clough referred to depressed fractures that were treated and elevated. I think that point was not brought out quite strongly enough. Some who have not had any experience in skull fractures—if any there be—might be led to think these fractures should be left untreated, which is, however, not the case. They should always be treated, and the depressed fracture elevated. Then there are very few complications.

As to concussions: The doctor spoke of concussion usually clearing up within a few hours. I have in mind

one case, which was the opposite, where a man fell off of a dray and struck on top of his head. He was in profound coma for three weeks, and he did not recover consciousness for three weeks longer, so that he had to be fed with a tube all the time. He could not speak or swallow, but he lived, and recovered without permanent effects.

DR. CLOUGH (closing): I have not much to offer in the way of closing.

We had one patient who developed epilepsy afterwards. He had a depressed fracture, which we raised perfectly. He had thirty epileptic convulsions in three or four hours. We brought him in, incised the dura, and let out the cerebrospinal fluid under pressure; and the man made a complete recovery, and is now in France. We always drain in these cases with small gauze drains. We do not open the dura unless there is some indication. If there is much hemorrhage it can always be controlled by packing.

Relative to this case of concussion which lasted six weeks, I think it would be very difficult to say that there was not some lesion more than concussion in that case.

AN INTENSIVE METHOD OF TREATING TUBERCULOSIS*

By J. E. CREWE, M. D.
ROCHESTER, MINNESOTA

Much has been accomplished by the modern method of treating tuberculosis of the lungs, and much credit and praise are given to those who have developed and practiced this treatment; however, these men have not been praised enough for having had the good sense and the courage to abandon the time-honored custom of giving medicine for this disease.

During the past five years I have employed a method in the treatment of tuberculosis that appears to me to have certain advantages. No claim of a new or startling discovery is made. I have simply combined methods well known in the treatment of disease, and I believe the ensemble may well be considered an intensive method of treating tuberculosis. I am unable at this time to present the data of convincing numbers, as my cases have been collected from an ordinary general practice in a small town; and until recently I have not had the advantage of a sanatorium in which to treat them. Within the past year a few patients were treated in tents adjoining a sanatorium to which tuberculosis cases could not be admitted.

The method may be applied to the best advantage in a sanatorium, but it may be used with good results in the patient's home with competent nursing and supervision. Success is meas-

ured by the thoroughness and persistency with which the treatment is carried out. Owing to the fact that the method is simple, and that the principles involved are not entirely new, I do not expect it to create any immediate enthusiasm; nevertheless, I believe that even in the small series of cases treated some results worth while can be shown.

The treatment in use now in any well-known sanatorium is doubtless based on correct principles, and that which is about to be described is based on the same principles, but is intensified, with particular attention to increased elimination of the poisons caused by the infection and the waste of tissue. Much tissue and fuel are consumed in the effort of nature to combat the disease, consequently in these cases there is a greater accumulation of waste in the body. I feel that we have been rather slow in recognizing the importance of the principle and the necessity of more thorough elimination and scavenging. Have we not been guilty of obstructing nature's efforts to eliminate? What physician has not tried to prevent the "deadly night sweat"? When a man works hard, and burns up an increased amount of fuel and tissue, he sweats. Why does he do so? Is it not to help eliminate the increased ash of the consumed fuel and tissue? A laborer consumes more fuel to maintain health

*Presented before the staff meeting of the Mayo Clinic, November 14, 1917, Rochester, Minnesota.

than does a man of sedentary occupation. If the kidneys fail, we try to increase elimination by causing the patient to sweat. The laborer who does not perspire is not a good laborer. He tires more readily because of the poison absorbed.

Let us assume that a person very sick with tuberculosis is badly poisoned, and that it is the poison, not the night sweats, that has weakened him. Nature causes this person to sweat in order to help eliminate the toxins and waste material. The intensive method of treatment provides that he shall be given hot baths, followed by hot dry packs, and made to sweat profusely. This can be done safely for reasons I shall mention later in this paper.

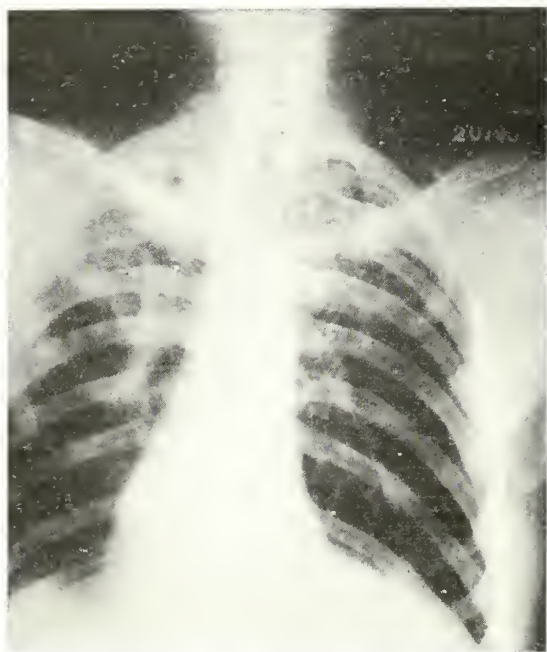


Fig. 1. C. J. H., aged 37. Plate taken just before beginning treatment. Treated at the sanitarium eight weeks. Gained 12 pounds. Went to work three weeks later, or eight months ago. Has retained weight; has no cough or fever; feels well.

Tuberculosis may be said to be caused by the increased activity of the tubercle bacillus in a body in which resistance and vitality have been lowered, and the more severe effects and fatal forms are usually due to the poisoning from a mixed infection.

"Speaking broadly, we may say that most diseases are due to poisoning from pathologic bacteria, from faulty elimination of the toxins generated in the body tissues, or from defective blood or defective circulation, resulting in malnutrition of certain tissues or parts of the body. Obviously, then, to cure disease we should seek

to improve elimination, to make better blood and more blood, to feed the tissues, to destroy the invading bacteria, to quickly remove bacterial and other toxic products, and to build up the body resistance."¹ Tuberculosis comes under this head, and I have likened the method of treatment to the efficient management of a furnace, which means more fuel, evenly stoked and with thorough scavenging and forced draught.

When the blood is impoverished and diminished in quantity by the ravages of the infection, nature attempts to make up what the blood has lost in quantity and quality by rushing the blood through the tissues faster, hence the rapid pulse. Lawrason Brown² has well said, "The physician

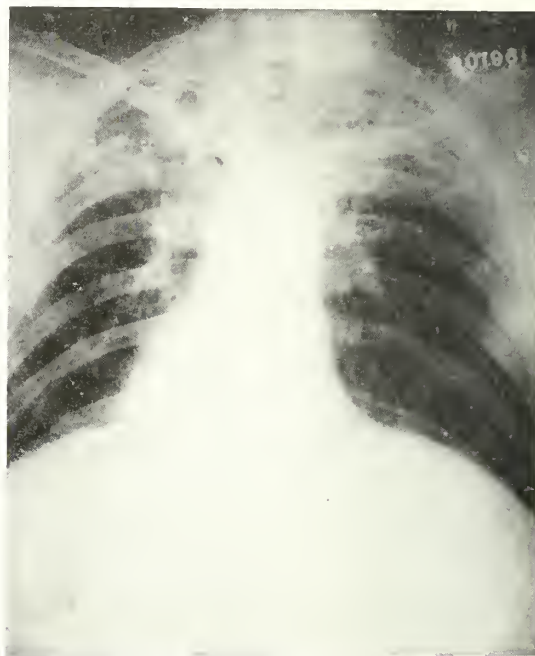


Fig. 2. Same patient as in Fig. 1, taken just before leaving the sanitarium.

must always bear in mind that he can influence the lungs through the medium of the body."

THE METHOD OF TREATMENT

The treatment is divided into two periods: first, that of intensive treatment, and, second, that of graduated exercise.

The first period, or that of intensive treatment, covers from one to three months, the time varying according to the intensity and extent of the infection and the resistance of the patient. During this period the patients are kept in bed, re-

1. Crewe, J. E.: Large Quantities of Milk in the Treatment of Disease. *Journal-Lancet*, 1916, xxxvi, 688-691.

2. Brown, L.: Tuberculosis Thesis, Diagnostic, Prognostic, Therapeutic. *A Rev. Tuberc.*, 1917, i, 193-205.

ardless of what the temperature and the pulse may be. They are given from six to nine quarts of very rich Guernsey milk a day. In some cases the milk is fortified by the addition of sugar of milk, but usually only raw, clean, tested Guernsey milk is used. The quality and purity of the milk are important, and we are especially fortunate in being able to secure milk from a splendid herd of pure-bred Guernseys, handled after the most modern and approved methods.

Milk is blood before it is milk. Osler speaks of it as being nothing more or less than white blood. This diet makes more and better blood faster than is done by any other means. Tuberculous patients seldom have any difficulty in taking from

cold, it is impracticable to give the treatment out of doors in very cold weather. I have tried keeping milk in thermos bottles, but this is not practicable because of the difficulty in properly cleansing them and because the patient becomes chilled by being obliged to uncover while pouring out and drinking the milk.

While it is preferable to treat tuberculosis out of doors, this is not necessary in severe weather, and I have seen very little difference in the improvement made by patients treated indoors and those treated in the open. This statement may be considered heresy, but I firmly maintain it, and I believe the pendulum will soon swing back and that there will be a modification of the methods,

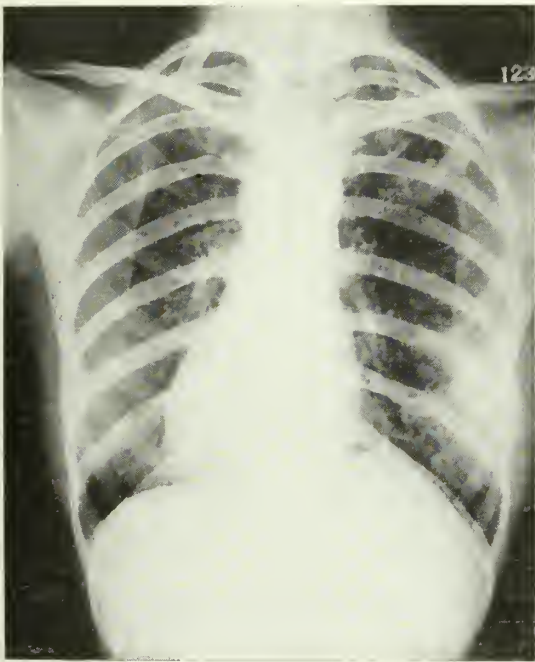


Fig. 3. Mrs. J. T., aged 34. Treated eight weeks three years ago. Has had no return of symptoms and has gained 31 pounds in eight weeks.

six to nine quarts of milk a day. It should be slightly warmed, and given in thirty-two half-hourly feedings, the patients being instructed to take the milk slowly, and to mix it thoroughly with the saliva.

Beginning cautiously, and with as little exertion as possible, all patients are given hot baths, followed by hot packs daily, and are made to sweat profusely. Even patients in very advanced stages bear this well, and all declare that they feel much benefited and refreshed after they have cooled off and rested.

Because of the frequent feedings and the necessity of not allowing the milk to be taken

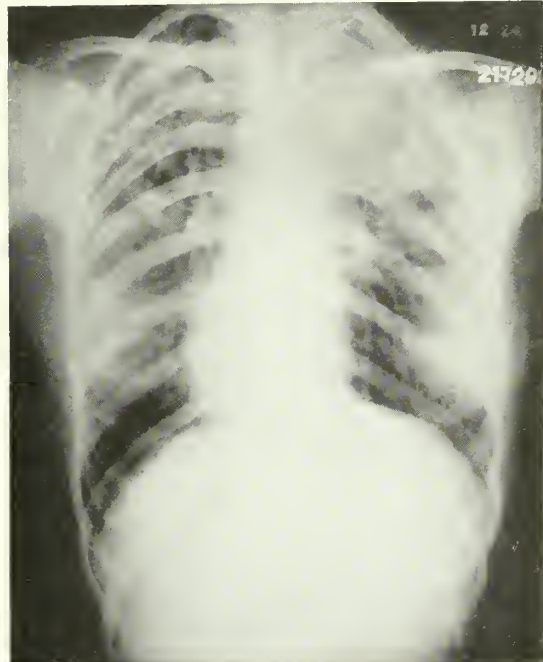


Fig. 4. Miss A. D., aged 29. Treated nine weeks. Gained 28 pounds. Has had no cough or other symptom in the six months since leaving the sanitarium. Has done no active work, but feels well and retains her weight.

now employed by some, of treating sick and bloodless people out of doors in the winter time in a climate such, for example, as we have in Minnesota. It is, of course, important to get all the fresh air possible into the house during the course of the treatment. My sanitarium is well heated, and in the morning the windows are closed for a short time while the baths and sweats are given and the toilets made. After this has been done, and a little time is allowed for the patients to cool off, the windows are opened and are kept open until the next morning. A good fire is maintained, and, although the rooms become

cool, the temperature is not unbearable. The beds are placed as near the windows as possible. The method works well, and the patients are happy and comfortable. In mild weather they are treated out of doors in porches or in tents or open shacks. I believe that all patients should be treated in or near the locality in which they wish to live. In nearly all cases, except the very advanced ones, the temperature becomes normal within ten days, and in most instances there is very little cough after two weeks in bed. This applies to both early and advanced cases. Soon after treatment is begun the cough becomes loose and soft, and the quantity of sputum raised is greatly increased. In a few days, however, in

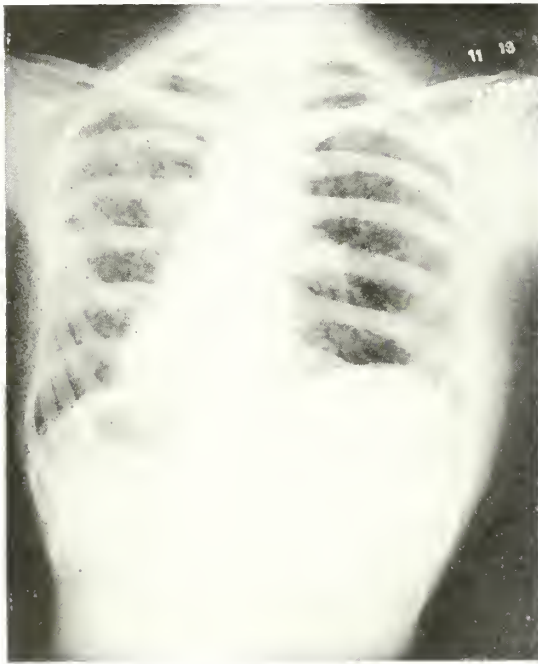


Fig. 5. Miss C. W., aged 32. Has been under treatment nine months. Is still at the sanitarium. Has gained 32 pounds. Has very little cough, and no fever. Takes quite active exercise, looks well, and feels well. Still has some trouble in the upper left lobe. The right side is clear.

most cases the amount decreases until the end of two or three weeks, when there are practically no sputum and very little cough.

In my experience the time required for the intensive treatment has seldom been more than two months; as a matter of fact, it is difficult to get the patients to take the large quantities of milk for a much longer time.

The second period covers from two weeks to three months, by which I mean until patients are able to take up their usual work, provided it is not of a nature obviously contra-indicated. In

some of the early cases, the patients, against advice, have gone to work after only a few days. They are given gradually increasing exercise, placed on a nourishing plain mixed diet, and allowed to drink as much milk as they desire, usually from one to three quarts a day, although a few prefer to have none. These, however, are urged to drink some milk after they have had a reasonable rest from it.

From observation in the treatment of non-tuberculous diseases by this method, I am convinced that there is something in milk other than its great food value, which, when the milk is given in sufficiently large quantities, has a profound effect on metabolism.

The series of cases which has been under observation is small, 36 cases only, in all stages of the disease. No patient has been refused treatment. It is not claimed that any of these patients is cured, but thus far one only has relapsed, and this could have been prevented. Two patients in the series have died, and one has been sick two years and may perhaps never get well. These three patients had acute tuberculosis, and there was complete consolidation of one lung. One other patient had one lung completely out of commission, and the other lung was extensively involved when he came to me. He had just been sent home from a state sanatorium as hopeless after having been there one month. He had developed a persistent diarrhea, evidently from intestinal involvement, which ceased after two weeks. I treated this patient one month only, eight months ago. When I last saw him (in November, 1917), he was doing common labor, but said he was going south because he did not like the cold. The lung was still consolidated.

Patients thus treated, in either early or advanced stages, average a gain of 4 or 5 pounds a week. One man (Figs. 1 and 2), height 5 feet 8 inches, gained 41 pounds in eight weeks. A woman (Fig. 3), height 5 feet 1 inch, gained 30 pounds in six weeks. Such patients do not appear to have an excess of fat. The flesh is firm and hard, and the weight is retained.

It seems to me that this method of treatment should receive consideration, because it is simple and rational and is based on good common sense. It is not very different from the methods in general use, but is more intensive, and while from the description the treatment does not appear attractive, it is surprisingly well borne, and the patients are very happy in their rapid improvement. They are, moreover, kept fairly comfortable indoors in very cold weather.

The average diet of a person at rest is about 2,000 calories, or for the average person doing ordinary work about 2,400 or 2,500 calories. One quart of 4 per cent milk contains about 600 calories, and therefore eight quarts are equal to about 4,800 calories. The milk we use will test about 5.5 or 6.5 per cent butter-fat, so that eight quarts contain much more than 4,800 calories.

In order to get the results we have had, it is important and necessary to have a supply of excellent clean milk, to carry out the treatment faithfully and rigorously, and to follow it up by other well-known methods of treatment in proved cases of tuberculosis.

Blood-pressure changes in these cases are interesting, as are the weekly weights and measurements. Such records will not, however, be given here, but will be included in a later paper.

Summary of reasons why the treatment produces satisfactory results:

1. More and better blood is made faster than by any other method known to me.

2. In non-tuberculous patients the pulse, if normal in the beginning, increases in rapidity, usually to 90 or 100, showing that there is more and better blood circulating faster. It is not unreasonable, then, to suppose that more nutrition goes to the tissues and more waste is carried away, and that the tissues are better washed.

3. Diuresis and diaphoresis are increased, and the action of the skin is further stimulated by the hot baths and packs. It is amazing to see how profusely these patients perspire, and that no bad effects result. On the contrary, after resting, they are refreshed and exhilarated.

We do not claim that any of these patients are *cured* in this short period. Three patients, quite advanced, are in the navy and army service. Two had only six weeks' active treatment. One very severe case had eight weeks, one did no active work for several months. Treated in February and March, 1916, is now in France and has been in the army since the fall of 1917.

The plate of this case was lost.

LETTERS FROM THE FRONT

By LIEUT. THEODORE H. SWEETSER.

MINNEAPOLIS

NOTE.—THE JOURNAL-LANCET is glad to be able to give its readers a glimpse of the life and work of a young medical man on the Western Front in France—such a glimpse as only the hastily written letters to family and friends can give.

Lieut. Sweetser was recently honored by receiving the British Military Cross for gallant and brave acts in rescuing men in grave danger.—THE EDITOR.

February 12, 1918.

Apparently you have grasped the idea that the [censored] area was a rather extraordinary place. Well, that idea was certainly correct, but you seemingly all have a wrong idea of where I was. I was not in one of those units that the Boche ran over or back on the 30th. No, my battalion—I was not with a field ambulance—my battalion was having a little rest in [censored] at the time, and on the morning of the 30th it rushed out to stem the tide. As soon as we met the Boche, he back went.

Early in the morning we had been bombarded [censored] by a mixture of gas shells and high explosives. As we were leaving the town (going toward the Boche) there were more shells, and the companies were fired upon heavily by airplanes with machine guns. The Boche infantry was nearly up [censored], but before long he

had been pushed back a good distance, so that the road to [censored] was free of them, though still swept somewhat by their shell and machine fire.

On the evening of the thirtieth I was established in an old Boche dugout with my orderlies and "umpteens" patients. There was a little branched trench outside the door of the dugout and an immature machine-gun emplacement which the Germans had started in their brief stay that morning. We had three wounded Germans and one wounded Tommy in the trench—squeezed in where they'd get most protection from fire; and the steps and inside of the dugout were crammed with wounded men,—in the three bunks, on the table, under the table [censored, 2 words], on the narrow floor, all up the steps. I remember that a man with a fractured thigh occupied the table, and that one or two in the bunks were shot through the abdomen, as also was one of the Germans. Often through the night I had to encourage those Germans (in German), and try to make them more comfortable—same with our boys. Of course, being only about 100 to 150 yards from the front line and close to the road mentioned above, I recognized

the possibility of capture, and tried especially to be nice in German, though I should, in any case, have tried to make them comfortable. You see we did not have any ambulance people to clear our little place that night.

There is a wonderful Church-of-England chaplain who brought a bunch of them up that road next day in broad daylight.

For the next couple of days we got along quite well, there being scarcely any casualties. A couple of my stretcher-bearers distinguished themselves by making visits to the wrecked and abandoned canteen in the nearby town whence they brought biscuits, bread, and other food up to the aid-post and to the men in the front line. They also brought water to the aid-post from a pump, or well, in a rather frequently shelled place. I made a few trips up the road to battalion headquarters, but spent most of the time in the trench and dugout.

On the evening of December 2d, I was mighty glad to see, marching out past us towards the rear, another brigade of our Division which had been practically surrounded since the 30th. Our attack on the Boche on the 30th had reopened the only road over which they could retire. And the fine thing was that they slipped out without being troubled by the enemy at all. The Boche, next morning, bombarded the vacated position very severely, and attacked them in mass, only to find our men gone. Though he found none of that brigade on the morning of the third, still he ran up against [several words censored] all right, and a tough time they gave him, too. He drove in one outpost, but the thin line held beautifully, and night found the two lines in practically the same position. That morning his bombardment had landed pretty well on my aid-post, in fact, several bombardments landed there. We were duly thankful, afterwards, on finding that one shell exploded just on the edge of the trench, while one hit the roof just over the entrance, and brought down about three hundred pounds of earth on the steps. But we were all safe throughout the day.

That evening, when another battalion relieved ours, no one told me that they were taking up a new line about five hundred yards behind my aid-post. We had been having a few cases and when they were not evacuated by ambulance-bearers by about 1 A. M., I chased off across the country to Brigade Headquarters to get some infantry men to carry off my stretcher cases. The first thing to do was to find a place to take them. So off I went down a sunken road to

where it met four other sunken roads, and there I found another aid-post. Just then they were machine-gunning the place, and I had to make a run for the dugout entrance. Coming out I also had to run because a few shells came over as well as machine-gun bullets. My water-bottle fell off, by the way, but I never missed it, and did not go back for it. So, then, the fact came out that there were no British between my aid-post and the Boche. Naturally the trip back to the post with the infantry men was a little strain. When we got there some ambulance-bearers under two officers had just arrived, so the infantry men went back whence they came, and I guided the bearers off on their way. At about 5:30 A. M. we finally got to rest in a Boche deep dugout. About 8:00 or 8:30 A. M., when I awoke, I was told that it was 5:30 P. M., and, for the moment before I found out the real time, I felt greatly rested.

That night, after we were supposed to have been relieved, a stray shell wounded some men, and it was up to me to get them back out of the line. The trip across country by a map was interesting, especially as some of the men persisted in trying to veer off to the left, and were afraid I was going to lead them into the German lines. One interesting thing was the carrying of a wounded man on a duckboard as a stretcher; no small feat when ditches and hills had to be crossed.

You already, evidently, have heard of my cheerful face with the two weeks' beard. Also my "cold" was no joke—it ended only with my leave to Paris.

April 14, 1918.

This is just to say that I'm alive and well; though there have been some rather narrow escapes within the last few days.

April 16th.

As I write this I am sitting in a hole in the ground covered partially by two wooden doors over which earth is thrown. My aid-post has three of these set in a field behind a hedge; they are for cover if the Boche should start to really strafe the little house we have. The country is most beautiful with sprouting grain and green fields and hedges. This morning at six I watched and listened to a song bird in an orchard. Of course I can not tell you anything of where I am or what I do, but I may tell a few little incidents. Before that, however, you should know that our boys have again proved themselves wonderful fighters, that they have stopped the Ger-

mans repeatedly, and have charged and repulsed them after being left the last battalion on the line.

Well, the other morning I looked around my neighborhood and decided that I would move to another house from which the wounded could be more easily and surely evacuated. The place was brick, but kind of wobbly, and the padre said he'd stay where we had slept that night—about two hundred yards away. Some of the orderlies stayed with him, being tired and seeing good beds there. One medical orderly and myself had cleaned up the new place when we heard a couple of shells burst nearer than others, and we went out to look. The last had landed about thirty yards from our old home. Well, I never saw people come out of a house so soon after getting out of bed. I'm sure it could not have been one minute before they came forth with not only their raiment but some food, too, including fresh eggs and a meat dish (brown).

Later in the day there being nothing to do, the padre and I lay in a grain field by the house sunning ourselves, while I cared for my tender burning feet. One dog and two goats pestered us a good deal; when one of the orderlies returned to his cards after a moment's absence, he found the goat chewing up his thirty-fifth card from the pack. Later the goat ate some cigarettes, and tried to eat the cigarette tin box. That was my first experience with a real goat of the story-book kind. Since then I have had five other aid-posts successively. Just after the goat incident a shell landed close enough to make me hunt cover before putting my boot on.

Just to show you that it is not unbearable we have had a good lot of fresh milk on most days, and there have been two dinners with roast chicken as the main dish. Today we had the second. My, but it was delicious! Just think of having fresh eggs and roast chicken cooked right on or in the farm house stove. The other day I had a three-egg omelette for breakfast. I deserved it, as breakfast came only at 9:30 after I had been up since 4:00 A. M. and chased all around the country; also I had gone to bed only after midnight.

Then to show that it is not all comfort—one of the servants was milking a cow in a field when a shell landed a little way off and down went the cow on the servant—stone dead. The servant emerged untouched and uninjured—the milking was discontinued. That afternoon we had to leave a chicken roasting in the house and retire to some little ditches in a field until a Boche

bombardment had finished. The house was spared, and we returned in a half hour or so to find the roast nearly done—it was most delicious, too! It is wonderful how many big shells can be put over without hitting anyone.

Well, it is 7:30 P. M. now and getting dusky enough for me to go call on another M. D. at his post, and my crowd, too—so goodbye for now.

April 23d.

And now I am in a beautiful district where I can hear guns in the distance, but where the landscape looks as peaceful as at home—nearly. It is nearly midnight, and my big news must be postponed.

April 26th.

Now, there are just two things that I must tell you in this letter—for private consumption. One is a nice letter from the Divisional General commending some actions and “carrying-on” in and after a gas-shell bombardment on the 13th of March up near [censored].

The other is that when my old unit was ordered to a quiet place out of the line on a “cushy” job. I applied to stay with my Division, and am back with the good old Ambulance where my adventures at the front began.

April 28, 1918.

There are several bits of rather important news for you this time. Please acknowledge receipt of the enclosed letter from the American Commander-in-Chief. In another I will send you a card that I received from the General commanding this Division, signed by himself.

The thought that is prominent in my mind agrees with a sentence in one of mother's letters that I read today: “The Lord is coming nearer to us all, surely, and His days are all days instead of occasional days.” This idea appeals to me strongly, as the Lord must have stood pretty close by me all this time to give me all these things and still preserve me from harm and death. One has to just trust in the Lord and carry on. The prayers of all you people over there have helped, I know; and the thought of you all over there has cheered me along, oh, so much!

May 2, 1918.

Today has been delightfully sunny and warm. I sat outdoors this morning reading “The Valley of Ten Thousand Smokes” in the February Geographic Magazine.

I'm on night duty, but last night I had an uninterrupted eight hours in bed, and tonight,

since nothing has come in (it's nearly eleven), I'm going to bed again soon—not a very busy Dressing Station. I hope it will continue thus.

It is very encouraging to get reliable news that the Boche is suffering most heavily nowadays, and gaining nothing. Without exaggeration, his losses are terrible, and it cannot help having a bad effect on his people at home. So far I cannot doubt that his drive has cost a lot more than it has been worth. He will try again, I suppose, and will probably gain some ground, but, at the price he pays, it won't be worth it unless he destroys this army. He'll never do that. In his latest efforts he got it in the neck, anyway.

I left my other unit and came here because I wanted to stay "up the line" with the old Division, and not go away back out of it all, even in a unit I like. Some older man should have a "cushy" job like that. So the old patches are still on my sleeves, and I'm back with my old friends, as I told you in my last letter.

June 3d.

This is a wonderful army. When these boys have to sit down and be shelled they take it as part of the business, and just "carry on" in the same good-natured way. And when they get a chance to go after the Hun, they do it with the greatest relish, and are tickled mightily at getting the chance. And my boys seem to make the most of their chances, too.

It looks as though America were now becoming quite awake to the situation, with the rapid increase in the strength of the American army over here, and the speeding up of shipbuilding. I have seen some of the new army over here (about a month ago), and others who have seen them agree that they are a keen, fine looking lot.

Just to show that I have not lost the sense of beauty, I might say that I spent some time today out in a neglected garden looking at forget-me-nots, poppies, roses, and other flowers. Two big roses, a red and a pink, now stand in a tin can over my doorway. In the home I had yes-

terday and the previous days I had two bouquets of big yellow flags on the shelf, picked up while going about my duties.

Do you know much about sandbags? Sandbags could form the subject of quite a long chapter. They have "umpteens" uses. First they are used, when filled with earth, for building and covering shelters in shelled areas; I have an extensive experience in such uses. Again they are used as containers in sending the rations "up the line." Some of the sights I see in this connection make me wonder how we'll behave when we return to civilization. The redeeming factor is the use (by officers, and men when they get a chance) of china-ware found in cottages near the line. Thirdly, sandbags are used, one on each foot, for heaters at night. Their efficiency is almost unbelievable! Fourthly, sandbags are used for puttees (or leggings) in muddy districts. There are other uses, too numerous to mention, almost; for instance as a pillow, or a shoe for an injured foot, etc.

June 5th.

Enclosed are a couple of buttons from Boche caps, souvenirs of a little "stunt" we did the other day,—a tip-top, successful little show it was, too!

But one of the best things we got was a mail-bag full of parcels to the German troops. Every parcel contained food, nothing but food, the poorest, vilest stuff imaginable! Very *bad* black bread in a poor state, and little chunks of bacon, mostly fat, but in bad shape partly. That was not newspaper stuff, but a real glimpse of conditions in Germany. I hope things there are something as that bag would seem to indicate.

And now I cannot keep decently awake, so it is up to me to retire and freeze. Here I've raved about the beautiful hot clear weather. Now it's still clear and beautiful, but *not* warm. I have my ground sheet and light rain coat, but no blanket with me. Just sleeping in my clothes with a sweater on. And still I sleep quite comfortable. Marvelous!

THE FIRST ANNUAL CONFERENCE OF THE MINNESOTA HOSPITAL ASSOCIATION

The first annual conference of the Minnesota Hospital Association was held in Minneapolis, at Curtis Court, on Thursday and Friday, June 27th and 28th. The Association was organized on April 20, 1917, upon the initiative of the Minneapolis Hospital Council, a local organization of hospital superintendents. The membership has increased during the year from forty-eight to sixty, representing fifty hospitals in the state.

A program providing for six sessions during the two days of the meeting had been prepared by the Executive Committee, composed of G. W. Olson, superintendent of the Swedish Hospital, Minneapolis, and president of the Association; Mrs. George G. Eitel, superintendent of the Eitel Hospital, and secretary-treasurer of the Association; Miss Harriett Hartry, superintendent of St. Barnabas Hospital, Minneapolis; Rev. Henry Hartig, superintendent of St. Andrews Hospital, Minneapolis, and Dr. S. G. Cobb, surgeon-in-chief of Cobb Hospital, St. Paul. This program was varied and comprehensive, and, as stated in the announcement of the meeting, "purposely crowded three days' work into two, so that members and visitors from out of town might have Saturday for visiting and shopping." The plan worked out very well, but it made two strenuous days for the participants and especially for the officers who conducted the meeting.

The conference opened with the registration of members and visitors, and the enrollment of new members, Thursday at 9 A. M. Within an hour fifty names had been entered on the register. Before the end of the first day this number was increased to sixty. Registration was in charge of Mrs. George G. Eitel, the secretary-treasurer.

The meeting-place—the new Curtis Court hotel—proved a fortunate selection. The beautiful ball-room, located on the first floor just off the spacious lobby, made a most convenient and comfortable convention hall.

At 10 A. M. President Olson called the meeting to order, and announced the opening of the first session of the conference. A prayer was offered by Rev. Wm. Meyer, superintendent of the Deaconess Hospital, Faribault.

The address of welcome on behalf of the city was delivered by Professor A. J. Todd, Ph.D., head of the Department of Sociology of the University of Minnesota. Professor Todd is also president of the Central Council of Social Agen-

cies of the city of Minneapolis, an organization with which all the hospitals in the city are affiliated. In welcoming the assembled hospital workers, Professor Todd paid a high tribute to their profession and the institutions they represent, characterizing their work as fundamental in the promotion of social welfare.

The president of the Association then read his annual address, which appears in this issue.

In preparing the program, the committee aimed to give prominence by precedence to "win-the-war" topics. In line with this aim, the subject of the first paper was "Food Conservation in the Hospital," presented by Mrs. Beth B. Titus, chief dietitian of the Minneapolis City Hospital. Many ways of saving wheat, fats, and sugar, developed and successfully carried out by Mrs. Titus, were brought out in her paper. A discussion followed which brought out a variety of suggestions for the saving of essential war food staples by the use of suitable healthful substitutes. The necessity for money saving, however, is vitally important in the hospital. The speakers were therefore unanimous in expressing a desire that the Government fix the prices of the wheat substitutes cereals.

"Wartime Economies in the Hospital" was the subject of a very instructive talk by Dr. A. B. Ancker, superintendent of the City and County Hospital, St. Paul. Dr. Ancker is the president of the American Hospital Association, the largest organization of hospital workers in the world. "Hospitals are exempted from all of the restrictions of the Federal Food Administration, but there is no valid reason why they should not observe every one of them. Hospital officials, nurses, and employees are as capable of 'Hooverizing' as any other class of workers. The same is true of patients on house diet. Patients on restricted diet have always been 'Hooverizing.'" That is the gist of Dr. Ancker's opinion of the ability of the hospitals to co-operate in the nation's food-saving campaign. On practical economies in the use of medical and surgical supplies in the hospital Dr. Ancker also holds decided opinions, based on actual experiences in his thirty years of service in what is generally acknowledged to be one of the best-conducted public hospitals in America. "Some years ago I came near accepting the superintendency of an Eastern hospital," Dr. Ancker related. "One of the conditions I insisted upon was that no purchases were to be

made without my order or approval. In discussing this question with the governing board, I found that they had entered into a contract for the purchase and delivery of five thousand dollars' worth of gauze in one year. In our hospital in St. Paul we bought five hundred dollars worth for the same period for about the same number of patients. I didn't go east, because I could never stand to see money squandered that way."

The morning session was concluded with a ringing speech by a "four-minute man" in behalf of the national war savings campaign.

THURSDAY AFTERNOON SESSION

The second session of the conference opened at 2 p. m. with a program dealing with the various phases of the nursing problem in the small, medium-size, and larger hospitals in the state.

"The Small Hospital Without a Training School," was the subject of a paper by Miss Lillie Denning, R.N., superintendent of the community hospital at Benson.

Miss Georgia H. Riley, R.N., superintendent of the Montevideo Hospital, read a paper on the topic: "Can the Small Hospital Maintain a Training School?"

Miss Louise M. Powell, R.N., acting superintendent of the University Hospital, Minneapolis, presented a paper on "The Training of Pupil Nurses from Affiliated Schools."

This program had been wisely planned to deal with the question of nursing and nurses' training from the three angles formed by the three distinctive groups into which the general hospitals throughout the state can be classified, viz.: the small hospital which has neither the bed capacity nor the daily average attendance of patients to entitle it to give any recognized degree of training; the hospital with a sufficient number of beds and patients to give a limited course of training prescribed by the State Board of Examiners of Nurses to pupils who are sent to affiliated larger schools; the larger hospital with a training school qualified to receive pupils partially trained in the smaller hospitals and finish their nursing education.

The papers and the discussion following brought forward and emphasized the fact that to train nurses properly it is necessary to have not only qualified teachers and pupils, but, most important of all, a sufficient variety of clinical material and adequate teaching equipment. The first two requisites are not difficult to provide in this state, where capable instructors and super-

visors and a high grade of student nurses may be obtained by any hospital offering reasonable pay and accommodations. The clinical material and teaching equipment, however, are sadly lacking in many of the small hospitals. Reorganization on a broader plan, development of community interest in what is now private enterprise, and making of the small hospital a social and educational factor will result in support and patronage that will place the hospital in position to conduct an accredited training school with affiliation.

The papers read at this session will be published, in part at least, in our Hospital Department in another issue.

THURSDAY EVENING SESSION

This session was devoted to a round table discussion of questions touching the details of hospital management.

When the session opened at 8 p. m., President Olson introduced Professor A. D. Wilson, Federal Food Administrator for Minnesota, who gave an inspirational talk on "Food Conservation in Institutions." Professor Wilson had originally been placed on the morning program, but because of an out-of-town engagement could not appear before evening. His talk was a valuable addition to what had already been gleaned from the morning's program on the important question of food saving.

Dr. Herbert O. Collins, superintendent of the Minneapolis City Hospital, presided over the round table conference, at which the following questions were discussed:

1. Should the training-schools in Minnesota adopt immediately the policy of giving credit, by shortening the three-year course, to college graduates?
2. Would it be good business practice to separate the training-school from the hospital as far as accounting and cost of maintenance is concerned? Would the result of such separation provide the answer to the oft-repeated charge that the hospitals are getting the nursing done for little or nothing?
3. Is the present method of taking the patient census, to arrive at the daily average number of patients, as prescribed by the Minnesota State Board of Examiners of Nurses, the correct one?
4. What are the advantages of a central linen room in the hospital and what is the best plan of operation?
5. What is the simplest, most efficient and economical way to disinfect a room after an infected case?
6. How can the hospital protect itself against losses on workmen's compensation cases where the hospital charges exceed the statutory allowance?
7. What is the best method of collecting delinquent hospital bills?
8. What is the remedy for the present shortage and high prices of hospital linens, blankets and bedding?

Inasmuch as we believe the large number of hospital superintendents who are readers of this journal are interested, the discussion of these questions will be the subject of a special article in our Hospital Department in an early issue.

FRIDAY MORNING SESSION

Convening at 10 A. M., the first paper of the session was on "The Design and Construction of the Smaller Sanatorium and Hospital," by Mr. E. H. Sund, architect, Minneapolis. Mr. Sund has designed a number of small surgical hospitals and several of the state-county tuberculosis sanatoria built recently. His paper was followed by a series of lantern slides illustrating floor plans, type of construction, and the finished appearance of the hospitals described. This paper was ably discussed by Dr. H. O. Collins, who brought out the fact that with all the excellence of design and construction put into the modern hospital, whether small or large, the builders too often forget to provide accommodations for those who must carry on the work in these institutions and who must necessarily live with their work day in and day out, in order to maintain satisfactory service to the sick.

Related to and illuminating the foregoing paper was a talk by Dr. Robinson Bosworth, St. Paul, executive secretary of the Advisory Commission for Tuberculosis Sanatoria in the state. Dr. Bosworth related the interesting fact that the building of modern sanatoria had resulted in a greater number of consumptives submitting to sanatorium treatment than ever before and for a longer period of time, and that a reduction in the death-rate from tuberculosis within the state could already be traced to the operation of these sanatoria. Dr. Bosworth's address was discussed by Dr. E. S. Mariette, resident physician at Glen Lake Sanatorium, Hennepin County, and Dr. Conroy, of the Nopemning Sanatorium, St. Louis County.

"The Value of Standardization of Hospitals in Smaller Communities in Minnesota" was the subject of an address by Dr. J. W. Andrews, Mankato. The movement for the introduction of standardized practices of a higher order in the matter of hospital records, such as case-histories, clinical reports, end-results, follow-up work, etc., as well as improved hospital organization with respect to laboratories and facilities for diagnosis, was commended and its advantages, even to the smallest hospitals, was pointed out. Dr. Andrews' paper was discussed by Dr. Arthur T.

Mann, Associate Professor of Surgery at the University of Minnesota.

"Hospital Business Record Keeping" was discussed in a paper by Mr. J. E. Haugen, superintendent of the St. Paul General Hospital. Mr. Haugen outlined a system in use in his institution which had proved satisfactory as to the amount and variety of detail necessary and desirable in hospital accounting, and yet been found economical in operation.

FRIDAY AFTERNOON SESSION

The fifth session of the conference opened at 2 P. M. Friday. The first paper was by Mr. George S. Grimes, attorney and member of the board of trustees of St. Barnabas Hospital, Minneapolis, on the subject, "The Hospitals and the Law—Extent of Privileges and Protection Granted to General Hospitals by the Laws of Minnesota." This proved one of the most valuable papers of the meeting, as Mr. Grimes, through years of experience as a hospital trustee, had become familiar with the legal phases of hospital work, and had worked out solutions of many knotty problems. The laws governing tax exemption for hospitals was explained, and the exemptions granted to charity hospitals from liability for acts of its servants in the treatment of patients. The injustices frequently suffered by the hospitals in losses of money by reason of our present workman's compensation law was referred to, and hospitals were urged to make united effort to reform this law.

The next and final paper of the comprehensive program was on "Mechanical Equipment and Fuel Economies," by Mr. R. B. Whitacre, St. Paul, an old experienced power-plant engineer. This paper brought out in detail many points relating to heating, ventilation, steam and hot-water production, etc., which are too often not given due consideration until mistakes have been made that require costly alterations.

The session was adjourned at four o'clock, and an invitation extended to all present to join in an automobile tour about the city. Automobiles had been provided gratuitously through a committee of the Minneapolis Hospital Council, headed by Miss Bertha Matlick, superintendent of Hillcrest Hospital. The tour led over the new Third Avenue bridge, through the University Campus, and over a carefully planned route in the course of which a view was had of practically every hospital in the city, with but two or three exceptions. A stop was made at the new building of St. Mary's Hospital, and a hasty in-

spection of this magnificent structure made. The tour proceeded into the suburbs and out to Brookside, to the charming summer home of Miss Harriett Hartry, superintendent of St. Barnabas Hospital. Here a delicious picnic lunch was served by dietitians of Minneapolis hospitals under the direction of a committee of which Miss Hartry was chairman. The party, returning by way of Lake Harriet, Lake of the Isles, and Kenwood boulevards, reached the hotel exactly in time for the opening of the evening session at eight o'clock. Thus a tour laid out to be covered in two hours was, because of the delightful arrangements, prolonged to four hours, and was voted by all the best entertainment ever experienced at a hospital meeting.

The evening session at eight o'clock Friday was the business session of the meeting. Reports of officers and committees were received and adopted. These reports deal with business details of the organization. The final action of the conference was the election of officers of the Association for the ensuing year. This election resulted as follows:

President, Dr. Herbert O. Collins, City Hospital, Minneapolis.

First Vice-President, Dr. E. S. Mariette, Glen Lake Sanatorium.

Second Vice-President, Mr. Fred Paulson, Norwegian Lutheran Deaconess Hospital, Minneapolis.

Third Vice-President, Mrs. Sarah H. Knight, Asbury Hospital, Minneapolis.

Secretary-Treasurer, Miss Lydia H. Keller, secretary of the State Board of Examiners of Nurses, St. Paul.

Members of Executive Committee: Dr. A. T. Laird, Nopeming Sanatorium, Duluth; Miss A. Jeanette Christianson, Northwestern Hospital, Minneapolis; Miss Louise M. Powell, University Hospital, Minneapolis.

PRESIDENT'S ADDRESS

By G. W. OLSON

Superintendent of the Swedish Hospital
MINNEAPOLIS

The Minnesota Hospital Association, organized April 20, 1917, has completed the first year of its existence and entered upon the second.

Starting upon its career almost simultaneously with our nation's entrance into the world war, the Minnesota Hospital Association was projected, perhaps, at an inopportune time, insofar as its own growth and development are concerned.

A mere infant, without the power and resources that can come to an organization of this kind only through experience and gradual development, the Association has as yet been in no position to be of any particular service to our great national cause as an organization. Some of our members, however, are serving with distinction in the military branches or in the American Red Cross. While the Association itself cannot claim to have accomplished anything of direct advantage to our common cause in this war, the contributions made by the hospitals of the state, represented by its membership, in trained medical men and nurses, are considerable and noteworthy, placing Minnesota in a creditable position before the nation.

The past year has been filled with unusual, if not unforeseen, experiences and trials for all of the multitudinous units, corporate and individual, comprising the American nation. The hospitals have been neither the last nor the least to share in these experiences and trials. While the hardships inevitably imposed by the placing of our country on a war footing have struck the hospitals with greater force, perhaps, than any other activity, there is not one loyal man or woman engaged in our calling who would have these hardships removed or even modified, if thereby the efficiency of our nation at war and the prospects of our early victory should be in the slightest degree lessened.

What are, then, the hardships imposed by the war upon the hospitals?

The loss of the services of some of their most capable doctors, nurses, and employes.

The reduction, and in many cases the complete discontinuance, of aid from voluntary philanthropic sources.

The tremendous increases in cost of all supplies used in the operation of the hospital, scarcely a single item escaping the upward trend of prices, with consequent necessity for the practice of rigid, almost abject, economy in all departments.

The wiping out of net earnings in the case of many self-supporting hospitals and the premature consumption of the maintenance appropriation in the case of publicly supported hospitals, causing the management increased worries and subjecting it to unjust criticism from that large portion of the public which never understands the burdens of the hospital.

But let us not speak further of the hardships and disadvantages the great war has brought upon us. Even this cloud has a silver lining. There are compensations.

Never before in the history of America, and, we might say, of the world, have the hospitals received such universal recognition as a great national asset. The war has accomplished in this respect what years of patient toil or brilliant exploitation could not have accomplished. The Government recognizes the hospitals as vital factors in the preparation for war, in the conduct of war, and in the restoration and rehabilitation that must follow the war. It is not assuming too much to say that our Government regards the hospitals as the one most vital resource in the great struggle in which we are now engaged, for the hospital is the indispensable agent for the preservation of man-power—the power which is the foundation of the fighting strength of the nation. The Government calls for the hospital-trained physician, the hospital-trained nurse, the hospital-trained dietitian, the hospital-trained sanitarian. It prescribes that the sick and injured in its service shall be treated in the best hospitals available, and according to the best hospital methods, or under conditions and in an environment approaching the best hospital standards.

Surely, such recognition from our Government is ten-fold compensation for our privations. We would raise our voices in exultation and our heads in justifiable pride, were it not that this recognition imposes upon us a greater responsibility than any we have ever before attached to our institutions and our work. The Government not only calls upon us as the qualified and accredited sources of supply for trained physicians and nurses, but it expects us to furnish them. So far we have given satisfactory response—we have “made good.” But are we prepared to keep up the supply? Are we expanding, intensifying, forcing our production of the very vital forces needed for the maintenance of the health and the preservation of the man- and woman-power of the nation? Herein lies the test of our present hospital system, if we may be said to have a system. It is the lack of a well-developed system that presents difficulties bordering on a national problem. In the absence of a national or even a state system governing our hospitals, it is supremely important that organizations such as ours be formed, maintained, and developed, so that relationship and co-operation of the closest character may be brought into existence between the individual hospitals functioning to train physicians and nurses, and care for the health of the people.

While Government recognition has been ac-

corded to the general hospitals of the country in a most gratifying measure, the public, which must support these hospitals, has not yet awakened fully to its responsibilities with respect to these institutions. Evidence of this is found in the falling off in voluntary gifts to hospitals and the often unreasonable complaints heard regarding hospital charges, even where these have been increased but slightly. An awakening needs to be brought about, so that our people may realize more fully than heretofore the demands their hospitals are called upon to meet and what slender resources these hospitals have without the generous support of the public. The question has been raised whether Government or Red Cross subsidy of hospitals training nurses would not be a proper use of war funds. Considering that practically all other schools training persons for specialized war service are at least partially supported by Government funds, the suggestion is not unreasonable. But hospitals are still regarded very generally as charitable institutions, and we who labor in and for them and feel in our own consciousness that the service rendered by the hospital never is and cannot be compensated by money, we know that the characterization is merited, that hospitals are charitable institutions indeed. And so long as our liberal Government accords wide latitude to private enterprise for the accumulation of wealth, so long do we feel justified in looking to private philanthropy for the maintenance of our charities.

To bring about an awakening of the public to the needs of the hospitals is distinctly a function that our Association can and should perform. Development and extension of our hospitals should be considered as a war measure. Hospitals whose patient accommodations are overtaxed, whose nurses' homes are overcrowded, should not hesitate to make their needs known and demand aid from the public. It is a patriotic duty which they owe to the community and to the nation. This war is going to bring about to a greater extent than ever before the hospitalization of every form of curable disease. And the lessons in efficiency and conservation we are now learning as a nation will result in provisions being made for the hospital care of the incurable also. The stamp of the Government's approval having been set so firmly upon hospital treatment of disordered health, there is every reason to believe that utilization of the hospitals by the public is going to increase both during and after the war.

Within our own state, hospital progress during

the past year may be said to have been normal. New construction has been merely nominal, however, and has not kept pace with the needs of the increasing population in many centers. But the immediate future promises notable additions to the hospital facilities in the state. Through private benefactions there will soon be built a new large general hospital in St. Paul. The city of Duluth has received a bequest of \$600,000 for the founding of a new general hospital. St. Mary's hospital in Minneapolis is completing, and will soon open, a new building which will be the largest in the state devoted to the care of private patients. Construction of a new modern building for the Lymanhurst children's annex of the Minneapolis City Hospital has been begun, but cannot be completed until the next legislature has authorized the city to issue further bonds for money for the completion of the structure.

A few small private hospitals have been discontinued during the year. Others have been transformed from private enterprises into community institutions, by transfer of ownership and control from an individual, usually a physician, to a group of citizens organized into a hospital association. These conversions of the village surgeon's individual enterprise into a community hospital, with ownership and responsibility in the hands of the best citizens of the town, is a good sign of a better understanding of the functions of the hospital on the part of both the profession and the laity throughout the state. It were desirable if more of the small private so-called hospitals could be turned into community enterprises, serving all the qualified physicians and the whole public within the county or whatever unit might be adopted as the community to be served. The nursing problem of this type of hospital is the great retarding factor in its development. It is now much easier for the individual surgeon to conduct a private hospital of a few beds in a private dwelling, where the care can be administered by a practical nurse, than to conduct a central hospital open to other physicians and to all the people, because in such a plant there must be a larger number of persons engaged, with a higher standard of system, organization, and discipline. To obtain the working force necessary to the operation of such a hospital presents a difficult problem under present conditions. The solution

of this problem is a task worthy of the best efforts of the leaders of the hospital and nursing profession. But for this one great difficulty, Minnesota presents conditions favorable to the development of the ideal small community hospital. I believe it would be possible in this state, through a little effort on the part of our Association, to secure legislation whereby hospitals could be aided by their respective communities with appropriations from public funds, eligibility to receive such aid to be determined by a state hospital inspector functioning under the State Board of Health. The hospital could then be made the center of public and private health activities in the community to which it belongs. Surely, it should be no more difficult to legalize the appropriation of town funds towards the support of a hospital than to a fire hose company, a town brass band, or a baseball park and team of players.

One of the most noteworthy and laudable activities in the hospital line in our state is the erection of tuberculosis sanatoria by counties, in co-operation with and by the aid of the State through the State Advisory Commission on Tuberculosis Sanatoria. There are now fourteen of these sanatoria in successful operation, all of recent construction.

The movement towards the standardization of hospitals inaugurated by the American College of Surgeons is receiving cordial support from the hospitals in our state. When our hospitals find that movements such as this one, or any movement looking to the regulation and improvement of hospital conditions, are designed to be genuinely helpful, there is no lack of co-operation.

While the hospital situation in Minnesota, upon critical examination, may be adjudged far from satisfactory, there is enough improvement noticeable from year to year to warrant optimism regarding its future. It lies within the scope and power of the Minnesota Hospital Association to hasten improvement of conditions, so as eventually to bring our state forward into the very front rank of states in respect to public interest in the care of the sick, the prevention of disease, the protection of health, the training of physicians and nurses, and provision by the public of adequate means for these most vital activities.

THE JOURNAL-LANCET

Represents the Medical Profession of

Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the

North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.

H. J. ROWE, M. D. - - - Casselton, N. D.

H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

JULY 15, 1918

LIEUTENANT-COLONEL FRANK C. TODD

Lieutenant-Colonel Frank C. Todd died of pneumonia on July 4, 1918, at the Presbyterian Hospital in Chicago. His period of illness was rather brief and followed a severe cold, which he contracted while inspecting hospitals for the Government.

The editor had the pleasure of seeing Colonel Todd at the Chicago meeting of the American Medical Association, and he looked as well and happy as he did at any time in his life.

Of course all of the profession of Minneapolis and of the greater part of the Northwest, as well as many men in the East, knew Frank Todd personally. He was a man who made acquaintances very easily and who impressed himself upon his friends, and a man of the type not easily forgotten.

Colonel Todd was born in Minneapolis on October 15, 1869, and graduated from the Academic Department of the University of Minnesota in 1891, and from the College of Dentistry in 1892. Dentistry, however, did not appeal to him, for he saw something in medicine more attractive, and he took up a medical course and graduated in 1894. He supplemented his medical course with attendance upon clinics abroad and in this country, and was associated for several years with Dr. Frank Allport, who now resides in Chicago, where he began his work in disease of the eye

and ear. His success was immediate, and he soon became associated with the Department of Eye, Ear, Nose, and Throat in the University of Minnesota, and in 1902 was made chief of the department. From that time on his professional career was a very intensive one, and he soon established himself as a skillful operator and conservative man, and as a man fitted in every way for the business, as well as the professional, side of medicine. He was constantly at work, very seldom taking a vacation except for a few weeks in the fall. He was ever planning something ahead, and his plans culminated finally in the establishment of a clinic in Minneapolis and the erection of a building for his work on Mary Place and Eighth Street. This was sumptuously furnished and contained all manner of equipment and rooms for the treatment of his large clientele.

In 1902 he was president of the Hennepin County Medical Society, and in 1913 he was made chairman of the Division of Ophthalmology and Otolaryngology of the American Medical Association. During the meeting of the Association in Minneapolis a few years ago, Dr. Todd was the chief of all of the committees, and again displayed his wonderful work as an organizer and financier. In 1914 he was president of the Minnesota Academy of Medicine.

Soon after the United States became involved in the war Colonel Todd became a member of a proposed base hospital, but he found that the scope of his work might be enlarged if he went into the Medical Reserve Corps, which he did with the rank of major. He was sent to Camp Dodge, and a few months ago became commander of the base hospital there. At the funeral his brother officers, a Red Cross Division officer and the chaplain from Camp Dodge, spoke in commendatory terms of Colonel Todd, his personality, his activity, the work he has accomplished, and the monuments he has left behind him to show that he was constantly looking after the welfare of others rather than himself.

Colonel Todd was one of the men to secure the establishment of recreation barracks for convalescent soldiers, a recreation house for nurses, and, finally, a house for visitors. The latter is to his sole credit. He sketched and planned and eventually put through this addition to Camp Dodge.

Colonel Todd leaves behind him a family consisting of mother, wife, and four children, and one brother who lives in Wisconsin.

Colonel Todd will be missed in the Northwest,

and particularly in Minneapolis, where he stood at the head of his profession and in his specialty. He will be missed among his friends and associates on account of his many good qualities, his interests, and his earnestness, and from the fact that he showed by his example how a man may rise in his profession, attain eminence, the respect and loyalty of his friends and patients, because his interests were sincere and his activities were tremendous.

DEATHS AMONG DOCTORS AND SOLDIERS IN WAR TIME

The European countries which have given so many medical men to the war have lost surprisingly few doctors, as far as can be ascertained. It is said from compiled figures that the British up to January first have lost 782 doctors out of a total of 14,000, and the deaths from illness were only four per cent, against 67 per cent in the Boer campaign. This is quite in contrast with the 92 per cent of deaths in the Napoleonic wars. There have not been 2 per cent of deaths from gas, and only a fraction of 1 per cent from shell-shock. It is rather remarkable that such a comparatively small number of deaths have occurred among British medical men, considering the tremendous amount of work which has been forced upon them. Not infrequently these men work from nine in the morning until midnight, performing from eighteen to twenty-five operations each, and not infrequently most of them are under shell fire; and occasionally doctors, nurses, and orderlies have to run from their operating-rooms in order to escape bombs and shrapnel. Of course, while this is said only of English doctors, there is probably a corresponding death-rate among the doctors of other nations. Doubtless, Russia lost a great many of her medical men. France unquestionably has had a death-rate comparable with the English. What has occurred in Italy, Germany, Austria, and other countries as to the deaths among physicians, is not known, but the supposition is that the percentage of deaths has been practically the same in all countries. Now that the United States Medical Reserve Corps are being sent abroad, together with members of base hospitals and other units, we shall begin to hear of casualties among doctors and nurses; and one must not be overwhelmingly surprised by a seemingly large number of casualties. The fact of the matter is that the death-rate is perhaps no more than occurs in civil life, and yet lay people and some-

times professional men are inclined to fear that there are more casualties than are reported among medical men. In looking over the "honor roll" as it appears in the daily papers one scarcely ever sees the name of a physician who has been killed or wounded, and yet casualties must occur among the professional classes. It is rather interesting to note that the number of deaths from other than war casualties is quite on a par with the deaths in this country.

The small casualty list which exists among doctors, nurses, and soldiers, is due to the improved surgical conditions which prevail in Europe, the immediate attention that is given to the patient, and the skillful care which he receives at the field hospitals, evacuation hospitals, and base hospitals. Even where the casualty list is seemingly large the number of men who recover from their wounds and who go back, either to their previous work or the fighting line, is measurably large. A comparatively small percentage of the wounded are wounded for life. This percentage may be increased as time goes on, and will show the needs of reconstruction and re-education of the soldier.

There seems to have been a lull in Congress as to the construction of reconstruction hospitals and also in the appropriations for maintenance and equipment. Perhaps this item is concealed among the enormous appropriations which have been so freely given by Congress and so freely approved by the President. At all events it is to be hoped that these appropriations may be available soon for hospital construction and that the training of teachers, officers, and workers may go on without any delay.

INCREASE OF MENTAL DISORDER IN WAR TIME

A problem that will confront medical men and state officials after the war is the increasing number of mental cases, some of them purely borderland cases and others frank mental outbreaks, due, as far as one can see, to conditions which promote and which stimulate war. First and fundamental is the individual himself, who perhaps has an heredity or a tendency in some line which, if sufficiently irritated, comes out as a disease or disorder. This is one reason why it should be the duty of draft boards and medical advisory boards to search more carefully into the antecedents of the applicants for military or naval service. If many of these "to-be" mental cases

could be eliminated before they were started, there would not be such a difficult problem for the authorities to meet. But, looking upon the applicant from a general point of view, sizing him up as a good, well, and able man, free from any visible physical or mental errors, he is put into the mill which grinds the soldier into the camp and into active service, and it is discovered that many of these applicants are nervously and mentally unstable. They can stand a moderate amount of strain, but when the strain becomes too great, due to work to which they are unaccustomed; to homesickness, for which there is but little relief; to drudgery, anxiety, and speculation as to what will be the outcome, it is no wonder that they break down mentally.

It has been said that the number of insane people recruited for army purposes has not increased, but, as a matter of fact, every state hospital has received a few, and every camp or cantonment contains a fairly good number of mental cases, perhaps 1 per cent or even less, who have to be cared for by the Government and its medical corps. Very little has been said about this, necessarily, as these cases are looked upon as acute conditions, due to exhaustion, or tire, or over-fatigue; and they will soon recover and go back into the ranks. Some of them do and some of them do not.

Then, outside of this great army, are the people who stay at home, the people even who live in small places, who are used to a quiet, simple environment, and who are thrown into a whirlwind of excitement by the criticisms and exaggerated stories of all kinds that pertain to war destruction and rumors of destruction, which are perhaps as important as actual destruction, for they set a neurotic or psychopathic thinking about things which he has never bothered his head over before.

Who can withstand the temptation to read about the war in the face of the lurid posters, the attractive sign-boards, the efforts to sell bonds and stamps, to get Red Cross subscriptions, and the mingling of women in Red Cross centers who work and work out of pure joy for their country's sake? And who can fail to combat in discussion the belligerent or non-combatant pacifists who argue always on the other side, and who discredit all newspaper information, and even the testimony of men who have been at the front? It may be said, without much fear of contradiction, that the newspaper headlines and their description of war activities are not infrequently responsible for many cases of insanity. One

woman conceives the idea, she being of French descent, that she is a second Joan of Arc, and must go to France to again save it from destruction; and in her mild and seemingly happy form of delirium she tells her physician that she went over to France Saturday evening and returned Monday morning, having accomplished her purpose. Another woman living in a small, isolated town where excitement is rare and silence is great, believes herself to be the cause of the whole worldwide catastrophe, and that she is responsible for the outbreak of the Central Powers. As she cannot be persuaded out of this idea, she must lie in her bed and be looked after away from her family, in order to counteract and eliminate her distress and her depressive delusion.

There are comparatively few people who are not interested in the war or some of its phases, and are not consequently under great pressure, particularly as this country is now beginning to appreciate what this war means; it is no wonder that many of them "lose their heads." This must bring out in many people a latent tendency which might have come out under some other stimuli, but happened to come out in war time. Then, too, there is much rushing and overwork in order to maintain a livelihood with the rise of prices of everything, from tooth-picks to pie, which is one of the elements that lead to discomfort. Various kinds of business have been subordinated to war measures, and this means the elimination of other business activities that have nothing to do with the war, but should be maintained for the benefit of those who do not go to war; but fate has decreed it otherwise, and many business men are on anxious seats, not knowing whether they will be able to maintain themselves at the high-pressure mark which the war demands.

This may apply to all races and nations, and, if a census and survey of the mental field are ever shown, it will be found that there has been a very decided increase in mental cases over that existing in the pre-war period. It behooves us, then, to exercise calmness, restraint, and moderation in all things, in order not to over-excite emotions or to permit the entrance of fear of any kind within our sensorium. It is the duty of doctors and educators, which duty many have undoubtedly already assumed, to spread the gospel of contentment and determination founded on substantial lines. In this way and in the sane government and control of the people the nation may be saved from many mental irregularities.

BOOK NOTICES

THE SURGICAL CLINICS OF CHICAGO, Volume II, Number 2 (April, 1918). Octavo of 208 pages, 79 illustrations, Philadelphia and London: W. B. Saunders Company, 1918. Published Bi-monthly. Price per year, paper, \$10.00; cloth, \$14.00.

These bi-monthly clinics are well worth reading by anyone doing surgery. The cases presented are varied enough to cover a large range of conditions, and one gets the opinion and technic of many men, often on the same subject.

This cannot help but broaden one's views, which in itself is vitally important, for it is surprisingly easy for the physician or surgeon to drop into a rut unless stimulated by contact with men doing similar work. Such lack of contact is well supplied by these clinical publications.

This volume contains two especially interesting articles:

Phemister's method of securing bone transplants from the upper end of the tibia for repairing defects of the mandible shows considerable thought and ingenuity.

Roy L. Moodie, of the Department of Anatomy, College of Medicine, University of Chicago, has an article on the pathologic lesions among extinct animals, which is a study of the evidence of disease millions of years ago. Fractures are shown to be among the most common, some dating back twenty million years. There are also evidences of traumatic necrosis, and many cases of exostoses, undoubtedly due to chronic irritation. Osteomata are also shown to be common.

While most of these lesions were due to traumatism, yet prehistoric bacteria are well known, especially in the petrified feces of fishes, so that it is possible to arrive at a fairly good conception of the bacterial flora of the colon of these fishes. This is a very interesting and readable article, and well illustrated.

Other subjects treated are "Hallux Valgus," "Head Injuries," "Hodgkin's Disease," "Sarcoma of the Tibia and Ulna," "Surgical Treatment of Facial Paralysis," "Osteomyelitis," "Surgical Treatment of Impotency," "Tendoplasty," "Cholecystotomy versus Cholecystectomy," "Salivary Calculi and Carcinoma of the Stomach-Pylorotomy."

It would be of added value if the after-course and, where possible, the end-result of the cases were also given.

—AREY.

AMERICAN ADDRESSES ON WAR SURGERY. By Sir Berkeley Moynihan, C.B., Temporary Colonel, A. M. S., Consulting Surgeon, Northern Command. 12mo, of 143 pages. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$1.75 net.

In this little volume, Mr. Moynihan has culled the newest thoughts of the men working in the different war zones of France and England, and, with his own experiences, is giving every one an opportunity to learn of the great advances being made in surgery in the present war.

The book will appeal to those who had the pleasure of listening to the addresses, for it gives them the privilege of reviewing them. Those who will read them in

this compilation for the first time, will find in them much valuable information, written in a masterly style.

The author reviews gunshot injuries as met with under different circumstances, including their treatment and also the treatment of the ugly wound of the shrapnel.

The address on the treatment of knee-joint injuries is of particular interest, and probably shows better than any other statement of the subject what the present war is doing toward improving surgical technic.

In his introductory address on the causes of the war, Mr. Moynihan has dealt very leniently with the treacherous Hun.

—WANOUS.

INTERNATIONAL CLINICS. Edited by H. R. M. Landis, M. D., Philadelphia, U. S. A., with the collaboration of Chas. H. Mayo, M. D., Rochester; Sir Wm. Osler, M. D., of Oxford, etc. A Quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, etc., and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Vol. I, Twenty-eighth Series, 1918. Published by J. B. Lippincott Company, Philadelphia and London. Price, \$2.50.

Even in comparison with and judging by the four volumes of the 27th series, this book is excellent. The lectures, the illustrations, and the digest are of immediate interest and to the point. They are consecutive with the earlier volumes in matter and progress.

Conciseness of matter contrasts strongly with the uncondensed lectures in which eight pages of matter is the foundation to the real point of the lecture.

The book is the usual and the best source for reference, as it has aimed to be.

—HAGGARD.

MISCELLANY

A MEMORIAL TO DR. FRANK C. TODD, CHIEF
OF THE DEPARTMENT OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY, ADOPTED
BY THE ADMINISTRATIVE
BOARD OF THE MEDICAL SCHOOL
OF THE UNIVERSITY OF MINNESOTA, JULY 5, 1918

It is with profound sorrow that the Medical School of the University of Minnesota receives the tidings of the sudden death of Frank C. Todd. These tidings stir the depths of affectionate memory, welling up through many years of intimate association, in the minds of his colleagues. They touch the spring of thoughts of him which "lie too deep for tears."

All they would say of him sums itself up in this: As student, teacher, surgeon, executive officer, and soldier, he has done honor to his alma mater, to his community, to his state, and to his country. As a friend he has been faithful alike in large and in little things. As a counsellor and organizer his particular genius shone. He has always been at the point of progress in the development of his school and his profession and both have been recognized, and have been fortunate in, his leadership.

To his family, the Faculty would tender the sympathy of its members in their untimely bereavement. Theirs is the rich legacy of the memory of a good father and a rare companion.

He has died in the service of his country as truly as though he were actually at the front. Gratefully and loyally his associates of this school salute the spirit which from that service has passed on to the immortality of those who greatly and simply serve.

E. P. LYON, Dean.

R. O. BEARD, Secretary.

SILVER NITRATE SOLUTION SENT FREE TO MINNESOTA PHYSICIANS

Since 1916 the law of Minnesota has required attending physicians and midwives to treat the eyes of every new-born infant with a one per cent solution of silver nitrate.

The legislature of 1917 provided funds for the purchase and free distribution of handy outfits for such treatment, and at least one outfit was sent to each physician in the state in August, 1917, by the Minnesota State Board of Health. Each outfit consists of six ampules of the solution with needle for puncturing the ampule. The ampule is made of paraffin wax and the solution contained in it will not lose its strength for some years. Further supplies of these ampules will be sent free of charge to any physician or midwife, on application to the State Board of Health in the State Capitol, St. Paul.

Very few requests for these ampules are being received from physicians. This must be either because the law is being ignored or because it is not understood that ample supplies of these ampules are to be had for the asking.

THE CHILDREN'S BUREAU OF THE MINNESOTA STATE BOARD OF CONTROL

To the Physicians and the Maternity Hospitals of Minnesota:

Numerous reports have come to the Board of Control that unmarried mothers are being urged to give their children for adoption or placement at a very early period, sometimes at birth. This practice is in direct contravention to the almost unanimous opinion of medical experts that an infant should be kept with its mother, especially during the critical, early months of its life, when it should be nursed by its mother. The State Board of Control, therefore, urges upon every maternity hospital licensed by the Board, and every individual interested in the welfare of infants, the necessity for keeping mother and child together for at least three months after birth. Such practice is not only desirable for the health and well-being of the child, but is in harmony with the spirit of the new laws relating to child welfare.

Reports have also come to the Board of Control that physicians and others throughout the state are taking infants from their mothers and parents and placing them in foster homes, or are assisting mothers to place out children without the required legal formalities. These reports come with special reference to the children of unmarried mothers. No doubt this procedure is due to lack of information concerning the new laws which govern the matter. Under Chapter 212 of the

Laws of 1917, a mother or a guardian can no longer give away a child, either by verbal agreement or by written assignment. Permanent rights in a child can only be transferred from the mother, the father, or guardian, by an "order or decree of court." This order can be procured in three ways:

1. A petition on the part of the proposed foster parents to the probate court for letters of guardianship.

2. A petition in the juvenile court to have the child declared dependent or neglected, and asking that the petitioners be made guardian.

3. A petition in the district court to adopt the child.

All persons are advised to take up with a duly authorized child-placing agency, or with a county child-welfare board, or with the State Board of Control, any matters relating to the transfer of rights in children and their placement in homes other than that of the parent or legal guardian.

NEWS ITEMS

Dr. J. A. Regner has moved from Wahnkon to Isle.

Dr. M. H. Marken has moved from Boyd to Fairmont.

Dr. T. M. Lee, of Buffalo, left for Fort Oglethorpe last week.

Dr. F. W. Briggs, of Moorhead, has received a captain's commission.

Dr. O. T. Stratton has moved from Salmon, Idaho, to Cascade, Mont.

Wrangell, Alaska, is said to be without a physician, and none near at hand.

Lieut. Bernard Sorose, of Detroit, went to Fort Oglethorpe, Ga., last week.

Dr. A. F. Moynihan, Sauk Center, has received a captain's commission in M. R. C.

Dr. G. B. Danelz, of Benson, is in Chicago taking a special course in x-ray work.

Dr. J. F. Lynn, of Waseca, has received his commission as captain in the M. R. C.

Dr. A. B. Stewart, of Owatonna, has received a commission as captain in the M. R. C.

Dr. Kenneth S. Caldwell, of St. Paul, went to the Great Lakes Naval Station last month.

Dr. W. S. Cherry, of Enderlin, N. D., has been commissioned lieutenant in the M. R. C.

Dr. M. J. Lynch, of Minneapolis, received his commission as captain in the M. R. C. last month.

Dr. E. M. Morehouse, of Yankton, S. D., has received a commission as captain in the M. R. C.

Dr. C. E. Betzer, of Washoe, Mont., has been given a commission as captain in the M. R. C.

The number of nurses who took the Minnesota examination for registration last week was 152.

Dr. Arthur Sweeney, of St. Paul, has been appointed consulting neurologist at Camp Dodge, Iowa.

Dr. C. S. Houston, of Park Rapids, has been commissioned captain in the Minnesota Home Guards.

Capt. Fred P. Moersch, of Minneapolis, is at home from Camp Upton, New York, on a brief furlough.

Dr. D. R. Clairborn, of Big Timber, Mont., received a commission as lieutenant in M. R. C. last month.

The new County Hospital at Grand Rapids (Minn.) was opened last month. The building cost \$55,000.

Dr. C. F. Morell, of Wadena, has gone to Brainerd, and become associated with Dr. J. A. Thabes, of that city.

Dr. George T. Ayres, of the Shipman Hospital at Ely, has received a captain's commission, and expects to leave soon.

The training-school for nurses at the Minnesota State Hospital at Rochester graduated fourteen nurses last month.

Dr. Leo M. Crafts, of Minneapolis, has gone to Camp Funston, Kas., to do special neurological work until September.

During the month of June 3,000 physicians tendered their services to the Medical Reserve Corps and the Naval Reserve Force.

The Sioux Falls (S. D.) Lutheran Hospital graduated five nurses last month, all of whom will enter the Red Cross service.

Drs. E. L. Perkins and S. A. and W. E. Donahoe, of Sioux Falls, S. D., received commissions in M. R. C. last month.

Dr. D. S. Fleischhaur, of Wabasha, resigned from army medical service on account of poor health, and has resumed practice in Wabasha.

The Deaconess Hospital of Bozeman, Mont., graduated a class of four nurses last month, one of whom has been in France for some months.

Dr. A. M. Fisher has resigned as physician for the state penitentiary at Bismarck, N. D. Dr. C. E. Stackhouse, also of Bismarck, succeeds to the position.

At the second annual meeting of the South Dakota State Nurses' Association a service flag with 28 stars was dedicated. The state quota of nurses required is 96.

The first annual meeting of the Minnesota Hospital Association was held in Minneapolis last month, a full report of which appears in another part of this issue.

Dr. J. T. Asbury, of Rochester, is now associated with Dr. C. W. Woodruff, of Chatfield, whose practice he will care for during Dr. Woodruff's service in the army.

The following St. Paul physicians were commissioned under a recent order of the War Department: Dr. T. J. Maloney, captain; and Dr. Harry McIntosh, lieutenant.

If a pending bill in Congress for national aid to states in health work is passed, Minnesota will receive as her share \$23,000 to be supplemented by a like amount from the state.

A child conservation division was created by the Minnesota State Board of Health last week, and Dr. E. J. Huennekens, of Minneapolis, is director of it on a part-time basis.

The attendance at the annual meeting of the North Dakota State Medical Association last month was the largest in the history of the Association. The registration was 130.

Fargo and Grand Forks, N. D., though the largest cities in the state, have the smallest death-rates among the cities of the state. Public-health conditions account for this fact.

Lieut. Arthur Haskell, a recent graduate of the Medical School of the University of Minnesota, is to receive the military cross of the British Army directly from the hands of the king.

A maternity home is conducted at 285 Sturgis St., St. Paul, by Mrs. Ida Pearson, without a license from the State Board of Control as required by law; and the condition of her home and the method of management are unsatisfactory to the Board.

The American Red Cross has sent out an urgent appeal for nurses' aids for relief work among French refugees. A brief course of training is required, and applicants must be between the ages of 25 and 35.

The following Minneapolis doctors have just received commissions in M. R. C.: Drs. A. T. Mann and M. J. Lynch, captains; Drs. H. J. Hartig, Rolf Hovde, R. O. Urban, and W. J. Kremer, lieutenants.

The result of the volunteer economic saving of food by eating less is manifest in Minneapolis in a marked decrease in the amount of sickness in the city and the lessened number of patients in the City and other hospitals.

Dr. George Tupper, who formerly practiced in Thief River Falls and who retired from practice several years ago, died in France last month. He joined the medical division of one of the allied nations when the war broke out.

Major LeRoy Southmayd, of Great Falls, Mont., has been retired from the R. M. S. because of a severe injury to his left eye. He was in command of the Ambulance and Field Hospital companies at Camp Lewis until his injury.

The State Board of Health, the Public Health Association, and the State Advisory Commission—all of Minnesota—have planned to remove the friction between them that has long existed to the detriment of their work. A joint meeting for this purpose was held last week.

Dr. W. G. Richards, of Billings, Mont., got into the M. R. C. only after several efforts to enlist. He is one of the five men Billings has given the Medical Corps, the others being Dr. E. A. Gerhart and the Drs. S. G. and F. L. Arnold and Dr. J. H. Bridenbaugh.

The North Dakota State Medical Association, at its annual meeting last month, recommended to the governor of the state for appointment on the State Board of Medical Examiners Dr. H. O. Altnow, Mandan; Dr. H. G. Montat, Grand Forks; and Dr. Paul Sorkness, Fargo.

The following Northwestern physicians received commissions in R. M. C. last week: Dr. John A. Dahl, Minneapolis, lieutenant; Dr. A. R. Colvin, St. Paul, major; Dr. N. R. Linneman, Duluth, captain; Dr. W. J. Maytum, Alexandria, S. D., captain; Dr. T. O. Moeller, Devils Lake, N. D., captain.

An institute dealing with child welfare was held at the University of Minnesota from July 1 to July 13; and at the close of this course, another course of lectures on work with needy families was begun and is now in session under the auspices of the secretary of the Woman's Service Club of Chicago.

The City Hospital of Minneapolis now sends a practical dietitian into the homes of patients who have been in the hospital, and of others when the need is apparent, to see that proper food, properly prepared, is provided for such patients. They also look after the hygienic conditions of the houses visited.

Lieut.-Col. Frank C. Todd, of Minneapolis, the commanding officer of the base hospital at Camp Dodge, Iowa, died on July 4 in the Presbyterian Hospital at Chicago of pneumonia contracted while inspecting military hospitals. He died at

the age of 49. Further notices of his life and work appear elsewhere in this issue.

The mid-summer meeting of the Southern Minnesota Medical Association was held at Winona last month. The program was carried out in the main, but a number of men who were to take part in the discussions were absent. The pleasure trip down the river on the Mayo boat was given up in order to conserve coal.

Results of the work of the visiting school-nurses in North Dakota have been startling in some cases. In the schools of one city 250 children were found with an infectious skin disease, 48 in one school had enlarged glands of the neck, and 60 out of 100 in one school had inflammation of the eyes. When a temporary and brief survey reveals such conditions, what will well-regulated, thorough, and continuous inspection not accomplish?

The Northern Division of the American Red Cross, the Minnesota Public Health Association, and the Advisory Commission of the State (Minnesota) Sanatorium for Consumptives have entered into an agreement of co-operation in the care, primarily, of consumptive soldiers, and of all men rejected for service because of their tuberculous condition. This co-ordination promises to unify this work, and, what is more important, to prosecute it. The Red Cross will furnish money, the Public Health Association will supply nurses, and the Advisory Commission will utilize the State Sanatoria as far as practicable. The State Board of Health and all health officers will be kept informed of cases coming within their jurisdiction.

The following physicians of the Northwest are now officials of the American Medical Association: Dr. E. S. Judd, Rochester, third vice-president and member of the Council on Scientific Assembly; Dr. Thomas McDavitt, St. Paul, chairman of the Board of Trustees; Dr. J. E. Moore, Minneapolis, member of the Judicial Council; Dr. H. M. Bracken, Minneapolis, member of the Council on Health and Public Instruction; Dr. Robert C. Coffey, Portland, Ore., member of the Council on Medical Education; Dr. L. G. Rowntree, Minneapolis, member of the Council on Pharmacy and Chemistry. The Section officers are mainly eastern men, because the Association meets in the East next year. The Northwest supplies two members. Dr. Emil S. Geist, of Minneapolis, is chairman of the Section on Orthopedic Surgery, and Dr. W. F. Braasch, of Rochester, is chairman of the Section on Genito-urinary Diseases.

PHYSICIANS LOCATED IN THE NEW LA SALLE BUILDING, SEVENTH STREET AND MARQUETTE AVENUE

Dr. F. L. Adair, Room 730; Dr. C. P. Aling, Room 840; Dr. H. B. Annis, Room 618; Dr. Elizabeth Barnard, Room 730; Dr. Wesley Bishop, Room 616; Dr. F. S. Bissell, Room 801; Dr. Chas. N. Brooks, Room 420; Dr. R. A. Campbell, Room 840; Dr. A. A. Cirkler, Room 616; Dr. George Cutts, Room 320; Dr. George M. Doran, Room 716; Dr. C. E. Dutton, Room 312; Dr. E. L. Gardner, Room 730; Dr. E. H. Hare, Room 730; Dr. O. J. Johnson, Room 630; Dr. Roy R. Kennedy, Room 301; Dr. T. E. McDermott, Room 630; Dr. J. A. McLaughlin, Room 312; Dr. E. L. Meyer, Room 840; Dr. H. W. Noth, Room 618; Dr. E. H. Parker, Room 730; Dr. T. A. Peppard, Room 730; Dr. F. H. Poppe, Room 730; Dr. J. S. Reynolds, Room 816; Dr. R. I. Rizer, Room 824; Dr. J. F. Scheeck, Room 312; Dr. H. L. Staples, Room 420; Dr. George H. Thomas, Room 730; Dr. F. R. Woodard, Room 800; Dr. Ray R. Knight, Room 800.

RECENT NEW ASSIGNMENTS OF NORTH- WESTERN MEDICAL OFFICERS

Minnesota—

To Camp Dodge, Iowa: Lieut. M. J. Shapiro, Minneapolis; Lieut. D. F. McCann, Bemidji.

To Fort Oglethorpe, Ga.: Capt. T. E. Flinn, Redwood Falls; Lieut. B. N. Sorose, Detroit; Lieut. T. J. Trutna, Silver Lake; Lieut. H. E. Hallsick, St. Paul.

To Camp Pike, Ark.: Capt. W. L. Palmer, Albert Lea.

To Portland, Ore.: Lieut. A. A. Wohlrabe, Mankato.

To Camp Grant, Ill.: Capt. R. E. Morris, Minneapolis.

To Rochester, Minn. (Mayo Clinic): Lieut. J. H. Doyle, St. Paul.

To Camp Beauregard, La.: Lieut. H. C. Bumpus, Jr., Rochester.

To Rochester, Minn. (Mayo Clinic): Lieut. J. B. Boyle, St. Paul.

Montana—

To Camp Lewis, Wash.: Capt. W. G. Richards, Billings.

To Camp Kearney, Calif.: Lieut. J. L. Treacy, Helena.

To San Francisco, Calif.: Major Rudolph Horsky, Helena.

North Dakota—

To Camp Dodge, Iowa: Lieut. E. C. Strucke, Garrison.

To Camp Lee, Va.: Capt. M. R. Iseby, Lankin.

To Rochester, Minn. (Mayo Clinic): Lieut. A. F. Grove, Dell Rapids.

Transfers

MINNESOTA OFFICERS

Capt. J. C. Harding, St. Paul, from Camp Beauregard, La., to Fort Riley, Kas.

Lieut. Frederick Barrett, Gilbert, from Fort Riley, Kas., to Camp Lewis, Wash.

Capt. R. E. Morris, Minneapolis, from Camp Grant, Ill., to Camp Dodge, Iowa.

Major E. S. Geist, Minneapolis, from Fort Oglethorpe, Ga., to Fort Sam Houston, Texas.

Capt. E. H. Marcum, Bemidji, from Jefferson Barracks, Mo., to Camp Grant, Ill.

Lieut. A. E. Detuncq, Preston, from Camp Sherman, Ohio, to Camp Jackson, S. C.

Lieut. A. C. Strickler, Sleepy Eye, from Fort Riley, Kas., to Camp Kearney, Calif.

Lieut. P. S. Epperson, Biwabik, from New York City to Camp McClellan, Ala.

Lieut. C. C. Corwin, Minneapolis, from Camp Lee, Va., to Camp Meade, Md.

Lieut. J. J. Donovan, Litchfield, from Camp Sherman, Ohio, to Camp Meade, Md.

Lieut. D. W. Kohler, Albany, from Camp McArthur, Texas, to Fort Sam Houston, Texas.

Capt. W. V. Lindsay, Winona, from Camp Meade, Md., to Fort Sam Houston, Texas.

Capt. Jas. McLaughlin, Minneapolis, from Fort Oglethorpe, Ga., to Fort Sheridan, Ill.

Capt. F. H. Manson, Worthington, from Camp Dodge, Iowa, to Rochester (Mayo Clinic), Minn.

MONTANA OFFICERS

Lieut. E. S. Porter, Moore, from New York City to Camp Joseph E. Johnston, Fla.

Lieut. F. B. Scott, Butte, from Hoboken, N. J., to Camp Dix, N. J.

Lieut. Harold Schwartz, Butte, from Jefferson Barracks, Mo., to Camp Dodge, Iowa.

NORTH DAKOTA OFFICERS

Lieut. W. P. Baldwin, Castleton, from Portland, Ore., to Camp Lewis, Wash.

Lieut. E. L. Goss, Carrington, from Camp Dodge, Iowa, to Fort Oglethorpe, Ga.

Lieut. J. R. Pence, Minot, from New York City to Fort Riley, Kas.

SOUTH DAKOTA OFFICERS

Lieut. L. J. Brookman, Vermilion, from Fort Riley, Kas., to Boston (Harvard Graduate School), Mass.

Lieut. C. N. Harris, Wilmot, from Milwaukee, Wis., to Camp Custer, Mich.

Lieut. J. C. Rogers, White Lake, from Fort Riley, Kas., to Camp Zachary Taylor, La.

OFFICE ASSISTANT WANTED

An assistant who is qualified to give anesthetics, and do ordinary laboratory work, also x-ray work. In answering give experience and salary expected. Address, Dr. C. J. Oliver, Graceville, Minn.

PARTNERSHIP WANTED

A physician of ability and excellent standing in his community, with eight years of large general practice, desires association with a busy physician and surgeon. Age 33; perfect health; married; draft exempt. Am willing to take special course as occasion requires. Very best references. Have preference for internal medicine and for the Middle West. Address 139, care of this office.

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Aua	1,283	1,437	0															
Albert Lea	4,500	5,192	3													1		
Alexandria	3,681	3,001	5															
Anoka	9,769	9,772	9															
Austin	5,474	6,960	12			1					1				1	1		
Barnesville	1,326	1,353	2		1	2												
Bemidji	2,183	5,099	15	1	1	4												
Benson	1,525	1,677	3											1				1
Blue Earth	2,900	2,319	1			1												
Brainerd	8,524	8,526	13	2	1	2			1		1				1			1
Breckenridge	1,282	1,840	3															
Canby	1,100	1,528	1															
Cannon Falls	1,239	1,385	3															
Chaska	2,165	2,050	*															
Chatfield	1,426	1,226	0															
Cloquet	3,074	7,031	2															
Crookston	5,359	7,559	9		1												2	
Dawson	862	1,318	4															
Detroit	2,060	2,807	5			1												
Duluth	52,968	78,466	151	6	3	40	1				3		1		1	7	1	7
East Grand Forks	2,077	2,533	0															
Ely	3,572	3,572	6			2												
Eveleth	7,752	7,036	7	2														1
Fairmont	3,440	2,958	5													1		1
Faribault	7,868	9,001	10		1	1		1										1
Fergus Falls	6,072	6,887	7		1											1		
Glencoe	1,788	1,788	2															
Glenwood	1,116	2,161	3															
Granite Falls	1,454	1,454	3			1												
Hastings	3,811	3,983	3	1		1												
Hutchinson	2,495	2,368	2												1			
International Falls		1,487	5															
Jordan	1,270	1,151	4			2								1	1	1		
Lake City	3,142	3,142	5			2												1
Le Sueur	1,937	1,755	1												1			
Little Falls	5,774	6,078	11			2											2	1
Luverne	2,223	2,540	5	1		1										1		
Madison	1,336	1,811	5													1		1
Mankato	10,559	10,365	29	1	1	5							1			3		
Marshall	2,088	2,152	5													2	1	
Melrose	2,591	2,591	2															
Minneapolis	202,718	301,408	580	52	8	131	5	8	6		30			6	5	26	3	23
Montevideo	2,146	3,056	7		1	1												
Montgomery	979	1,267	1			1												
Moorhead	3,730	4,840	6			2										1	1	
Morris	1,934	1,685	2													2		
New Prague	1,228	1,654	2	2														
New Ulm	5,403	5,648	14	2		3												
Northfield	3,210	3,215	4								1					3		
Ortonville	1,247	1,774	3													2		
Owatonna	5,561	5,658	7	1		1												
Pipestone	2,536	2,475	2															
Red Lake Falls	1,666	1,666	1		1												1	
Red Wing	7,525	9,048	8			2												
Redwood Falls	1,661	1,666	4		2													
Renville	1,075	1,182	0															
Rochester	6,843	7,844	61	3	1	5	1		1							14		
Rushford	1,100	1,011	0		1													
St. Charles	1,304	1,159	1															
St. Cloud	8,663	10,600	12	1		4					1					1		
St. James	2,102	2,102	0															
St. Paul	163,632	214,744	295	27		59	6	8	1		8				5	13	1	14
St. Peter	4,302	4,176	3															
Sauk Centre	2,154	2,154	3			1												
Shakopee	2,046	2,302	1															
Sleepy Eye	2,046	2,247	0															
South St. Paul	2,322	4,510	3						2									
Staples	1,504	2,558	0															
Stillwater	12,318	10,198	8	1		2												
Thief River Falls	1,819	3,174	5	1	1													
Tower	1,111	1,111	0													1		
Tracy	1,911	1,826	4															
Two Harbors	3,278	4,990	6															
Virginia	2,962	10,473	11			1									1	1		
Wabasha	2,622	2,622	9	3		6									1	1		
Warren	1,276	1,613	1													1		1
Waseca	3,103	3,054	6															
Waterville	1,260	1,273	1															
West St. Paul	1,830	2,660	8	1		3		1										
Willmar	3,409	4,135	8		1													
Winona	19,714	18,583	21	5		1										1	1	1
Winthrop	813	1,043	0															
Worthington	2,386	2,385	2	1														

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	0															
Aitkin	1,719	1,633	2															
Akeley			0		1													
Appleton	1,184	1,221	2															
Belle Plaine	1,121	1,204	0															
Biwabik		1,690	2															
Bovey		1,377	0			2												
Browns Valley	721	1,058	0															
Buffalo	1,040	1,227	1															
Caledonia	1,175	1,372	1															
Cass Lake	546	1,011	1															
Chisholm		1,684	1				4											1
Coleraine		1,613	1															
Delano	967	1,031	1															
Farnington	733	1,024	2	1														1
Fosston	864	1,055	3		1													
Frazee	1,000	1,645	2				1											
Grand Rapids	1,428	2,239	3															
Hibbing	2,481	8,832	17	1			7	1										
Jackson	1,756	1,907	0															
Janesville	1,254	1,173	0															
Kenyon	1,202	1,237	2															
Lake Crystal	1,215	1,938	0															
Litchfield	2,280	1,333	5															
Long Prairie	1,385	1,250	1															
Madelia	1,272	1,273	4	2			1				1							
Milaca	1,204	1,102	2															
Mountain Lake	959	1,081	0															
Nashwauk		2,080	1				1											
North Mankato	939	1,279	1				2											
North St. Paul	1,110	1,404	0															
Osakis	917	1,013	1															
Park Rapids	1,313	1,850	4				1											1
Pelican Rapids	1,033	1,019	0															
Perham	1,182	1,376	3				1											1
Pine City	993	1,258	1															
Plainview	1,038	1,175	3															
Preston	1,278	1,175	0															
Princeton	1,319	1,193	6															2
St. Louis Park	1,325	1,555	1															
Sandstone	1,325	1,743	3	2			1											1
Sauk Rapids	1,189	1,818	1															
South Stillwater	1,391	1,745	2	1														
Springfield	1,422	1,343	3															
Spring Valley	1,511	1,482	1															
Wadena	1,770	1,817	3															1
Wells	1,520	1,820	1															
West Minneapolis	2,017	1,755	5	1		1	1								1			
Wheaton	2,250	3,022	5															
White Bear Lake	1,132	1,300	0						2									
Windom	1,288	1,505	2															
Winnabago City	1,944	1,749	1													1		
Zumbrota	1,816	2,555	2															
	1,119	1,138	1															
STATE INSTITUTIONS																		
Anoka, Asylum			1	1														
Faribault, School for Blind			0															
Faribault, School for Deaf			4	1		1												
Faribault, School for Feeble Minded			22	2		1												
Fergus Falls, Hospital for Insane			12	1												1		
Hastings, Asylum			4															1
Minneapolis, Soldiers' Home			1															
Owatonna, School for Dependents			1															
Red Wing, State Training School			12															
Rochester, Hospital for Insane			0			1												
Sauk Centre, Home School for Girls			0															
St. Peter, Hospital for Insane			18	6														
St. Cloud, State Reformatory			0															
Stillwater, State Prison			0															
OTHER PARTS OF STATE			894	79	17	108	6	7	9	...	9	1	...	3	12	50	2	39
Total for state			2550	215	44	426	20	27	21	...	55	1	2	11	37	147	15	101

*No report received. REGISTRAR not doing his duty
51 stillbirths not included in above totals.

Oats Rank First

Oats yield 1810 calories per pound. But a better rating is by "scores" which give definite values to every food element.

Under the "score" rating, as adopted by experts, foods compare as follows:

Oats	2,465
White Flour	1,257
White Bread	1,060
Graham Bread	1,525
Rump Beef	1,221
Hominy	1,147
Lamb	1,320
Fowl	1,453

So oats far excel in food value. And they cost about one-eighth what meat costs for the same food units.

In these times, when meats are high and wheat is scarce, oats should be encouraged.

Quaker Oats

This brand is made from queen oats only, so it has exquisite flavor. We get but ten pounds from a bushel, using just the rich, plump grains. Yet it costs no extra price.

The Quaker Oats Company

Chicago

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

65 East Lake St. - - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and anaerobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or

Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.

5 S. Wabash Ave.

ST. LOUIS, MO.

4485 Olive St.—Corner Taylor

NEW YORK, N. Y.

18 E. 41st St.

PUBLISHER'S DEPARTMENT

THE WM. MEYER UNIVERSAL KLINOSCOPE

The Meyer Universal Klinoscope commends itself on sight to every physician. It is a very neat-looking apparatus; it does its work perfectly, operating in the perpendicular or horizontal position, but can be changed from one position to the other with the patient upon it almost without effort. It occupies a very small space, and is as movable as a chair, as it moves on ball bearings.

A glance at the illustration, seen in the Company's announcement on another page, confirms all the good things said about this appliance.

It can be seen at the Standard Medical Supply Company's headquarters, 1006 W. Lake St., Minneapolis; or a descriptive booklet will be sent to any physician upon application to the manufacturers, Wm. Meyer Co., Chicago.

HORLICK'S MALTED MILK

Malted milk is both a beverage and a food; and Horlick's product is the only one we think of when "malted milk" is mentioned. Notwithstanding the fact that it is everywhere known as both nutritious and delicious, it is not used as much as it should be by all classes of people. When a child is not holding its own in natural development, the use of malted milk will soon restore it to its normal condition, and very often prevent a severe sickness. When the business man becomes languid and loses his appetite, or when he is tired, both physically and mentally, a diet, full or partial, of Horlick's Malted Milk for a few days will give the whole system new tone; and such a diet, with a few days of complete rest, will restore many a man or woman on the verge of collapse.

Horlick's never disappoints.

THE NATIONAL STERILIZER

The Northwestern Steel & Iron Works, of Eau Claire, Wis., makes a high-pressure sterilizer that has commended itself so thoroughly to medical men and hospitals that it well deserves the name "National."

It is equipped to work with gas, gasoline, or steam; and it is equally efficient with either. It turns out all dressing bone-dry.

It is made in three sizes, and sells, respectively, for \$60 to \$145 complete.

It is sold on approval and under a guarantee of perfect satisfaction. Most all surgical dealers sell this sterilizer, and the guarantee is backed both by the house that sells it and the firm that makes it; hence no disappointment is likely to come to the purchaser, and no loss can come to him from its purchase.

DR. WEIRICK'S SANITARIUM

At no time in the past has there been so great need for high-grade sanitarium work for the care, treatment, and possible cure of drug addicts, and nervous cases. Institutions that gained a high standing among medical men for their management of alcoholics, now find a demand upon them from the profession to care for the very large number of men and women who have fallen into the habitual use of narcotic drugs.

Such an institution is Dr. Weirick's Sanitarium at Rockford, Ill., which has practically a national reputation—and an excellent reputation, too—for its handling with scientific skill and genuine humanity all such cases, including nervous-mental cases.

This institution was established in 1901, and has steadily grown in usefulness and favor to the present date.

HEADACHE AND NEURALGIA

Is there anything more harmlessly comforting in these painful conditions than K-Y Analgesic, locally applied?

"Sick headache," "bilious headache," "nervous headache" and just "plain headache" are usually relieved when K-Y Analgesic is properly employed.

The local use of K-Y Analgesic does not in the least take the place of, or interfere with, any treatment looking to the removal of the cause of the headache. Rather, K-Y Analgesic is simply a useful adjunct to general treatment.

K-Y Analgesic is not a panacea—it is simply a safe, non-greasy, local anodyne, remarkably effective within its rational limitations.

Samples will be forwarded to physicians on request to Johnson & Johnson, Van Horn & Sawtell Dept., 15-17 East 40th St., New York City.

A VERITABLE PROP

After the subsidence of the acute symptoms of any serious febrile disease, an examination of the blood will almost always reveal a degree of anemia in direct proportion to the severity and duration of the primary disease. It is thus always desirable in such cases to adopt measures to revive, restore and reconstruct, and with this object in view one should begin at the foundation, i. e., the blood itself. To construct new red cells, and reconstruct those which have become dehemoglobinized by disease, nothing is more potent in effect than Pepto-Mangan (Gude). This standard preparation of organic iron and manganese supplies the vital fluid with the elements needed to reconstruct and restore its oxygen carrying capacity, by contributing the necessary hemoglobin. Pepto-Mangan is palatable, absorbable, and promptly assimilable. It encourages the appetite, without disturbing digestion or causing constipation.

MUDCURA SANITARIUM

The sulphur mud bath is too well known to need commendation, yet the indications for its use grow from year to year in the estimation of physicians who study the results obtained in both acute and chronic cases.

It is, however, very essential that the right institution be selected when a physician sends his patients for this treatment.

We believe no mistake will be made when a doctor sends his patients to the Mudcura Sanitarium at Shakopee, Minn., which is under the management of Dr. H. P. Fischer, as medical director, and Dr. G. P. Dempsey, as house physician.

The institution has a capacity for 100 patients, and is conducted like a modern hotel. The buildings are fire-proof, steam-heated, and electric-lighted. It is only 20 miles from the Twin Cities, and is located in a beautiful park with beautiful surroundings.

Dr. Fischer will be glad to give any information desired, and to have physicians visit the sanitarium.

TYPHOID MIXED VACCINE

The prevention of disease in war times becomes more important than in normal peace times. Physicians are fewer, obligations to our country are greater, and good health is of paramount importance.

The typhoid infections have long been a public danger and in other times have been a serious menace to the armies in the field and camps. Now, thanks to vaccines, this dreaded scourge has been practically eliminated from the armies.

In conjunction with ordinary sanitary precautions there is no doubt but that typhoid vaccination will result in the final suppression of the disease among the civil population, which has contributed a toll of about twenty thousand lives yearly. Confidence and enthusiasm on the part of the physician in immunization against the typhoid infection will beget confidence and enthusiasm among his clientele, ultimately resulting in a lowered morbidity and mortality rate.

Eli Lilly & Company, of Indianapolis, recommends its Typhoid Mixed Vaccine in preference to Typhoid Vaccine, since the prophylaxis against the allied infectious, para-typhoid A. and B. bacilli, rests in the same measures that may be taken against typhoid. For that reason it is important that immunization be made with Mixed Vaccine.

Lilly Typhoid Vaccines are supplied in ampoule vials and syringe containers. A copy of a handy reference booklet on Biological Therapy will be sent to our readers on receipt of requests made to Eli Lilly & Company at Indianapolis.

MEXICAN EDITOR DECLARES U. S. MEXICO'S FRIEND

"The proof that America is friendly towards Mexico has been furnished," said Leo D. Walker, editor of *El Progreso*, Monterey, in response to a speech of welcome made by Arthur Meeker, vice president of Armour and Company at a luncheon on June 26th, tendered the visiting Mexican Editors by Armour and Company, at the Saddle and Sirloin Club at the Union Stock Yards.

Mr. Walker referring to an address made earlier in the week by one of the party denied that there was any want of proof of the sincerity of the friendship of the United States toward Mexico saying it was unfortunate an opposite impression had been made.

"The proof of the sincerity of the friendship of the United States toward Mexico was given by President Wilson, when he received us in Washington," said Mr. Walker. "We are taking his words to Mexico, and we know the effect on our compatriots will be such as we desire."

"We have seen your enormous progress in factories and in munition plants but we have also seen what has impressed us deeply, the spirit of everyone bending in the one direction to win the war. We are sure you will win the war."

After the luncheon the party made a tour of the Armour plant, and witnessed the way the large food purveyors have met the demands of the government and are meeting the Nation's demands for food for the army and those of our Allies. They expressed admiration for the wonderful efficiency in the slaughter of animals and the utilization of by-products.

Hay Fever

Successfully Treated with

Bacterial Vaccines

Pollen irritation and breathing of the hot dust laden atmosphere favors the development of pyogenic bacteria in the respiratory tract which then become a primary factor of the disease.

Experience shows that the immunizing influence of an appropriate bacterin will either cure the disease or so modify it that it causes but little distress. Use Sherman's No. 40.

Write for Literature.

MANUFACTURER
OF
BACTERIAL VACCINES

G. H. SHERMAN, M.D.
Detroit, Mich.
U.S.A.

Ergoapiol (Smith)

Its Utility in the Treatment of

AMENORRHEA, DYSMENORRHEA AND OTHER DISTURBANCES OF MENSTRUATION

Despite the fact that Ergoapiol (Smith) exerts a pronounced analgesic and sedative effect upon the entire reproductive system, its use is not attended with the objectionable by-effects associated with anodyne or narcotic drugs.

The unvariable certainty, agreeableness and singular promptness with which Ergoapiol (Smith) relieves the several varieties of amenorrhea and dysmenorrhea has earned for it the unqualified endorsement of those members of the profession who have subjected it to exacting clinical tests.

Dosage: Ordinarily, one to two capsules should be administered three or four times a day.

MARTIN H. SMITH CO.

NEW YORK,

U. S. A.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, AUGUST 1, 1918

No. 15

THE ARTIFICIAL FEEDING OF INFANTS*

By ROOD TAYLOR, M.D., D. Sc.

Mayo Clinic
ROCHESTER, MINNESOTA

In 1916 Dr. Sedgwick presented before this Association a discussion on the subject of breast-feeding, which, I am sure, is here, as it is elsewhere, a far more important topic than that of artificial feeding, on which your secretary has requested me to speak.

The conditions in Montana, with practically no congested slum districts, the people living largely in small communities, are very different from those in centers like New York, where large numbers of babes with no mothers have to be cared for. The conditions throughout the Northwest are very much the same. Even in Minneapolis, where I formerly cared for large numbers of babes from poor parts of the city, in the Infants' Welfare Clinics, artificial feeding from the outset was the exception. The principle which I am sure Dr. Sedgwick presented to you, that practically all women, save those with open tuberculosis, can supply, if not the whole of their infants' needs, at least a considerable portion of it in breast milk, and that this supply can be maintained by suitable stimulation of the breast, for at least a number of months, holds true always. I have never had under my care a nursing babe whom I have had to take off the breast within the first few months. The problem of artificial feeding, as it comes to me, concerns, first, a small number of foundlings and babes whose mothers have cancer of the breast or pul-

monary tuberculosis, and who have to be bottle-fed from the outset. The greater portion of them, however, are babes, two, three, or four months of age, who have had the breast for a short period of time, but who were weaned, either because they themselves did not nurse vigorously and stimulate the mother's breasts or because they were crying or fretful, or passed green, frequent stools, and it had been erroneously supposed that the breast milk was at fault.

There are no systems of infant-feeding, any more than there are systems of medicine. Percentage feeding, so largely employed in Boston and Philadelphia, is only a method of reckoning the relative amounts of the different food stuffs given to the infant. The foods taken well by one infant will not be suitable for another; and, no matter how the formula is reckoned, the underlying principles are, first, that the infant must be fed food which he tolerates both in quality and quantity, and, second, that the relative proportion of the food stuffs,—fats, protein, and carbohydrates,—must be adapted to the infant's physiologic ability and needs.

Cow's milk forms the basis of all artificial infant foods. It contains the protein casein, the carbohydrate lactose, or milk sugar, fat, and the soluble whey proteins, and salts. Protein taken into the intestine brings forth alkaline digestive juices, and, when it reaches lower intestinal levels and becomes subject to bacterial action, under-

*Presented before the Montana State Medical Association, July 10-11, 1918, at Butte.

goes a certain amount of putrefaction with the production of alkaline end-products. Carbohydrate, on the contrary, undergoes fermentation with the production of acid. Lactose, for example, may produce lactic acid. Fat is split in the stomach and intestine, as you know, into fatty acids and glycerine. The further fate of the fatty acid depends upon whether the surrounding media is alkaline or acid, this reaction depending, as I have before stated, on the relative proportion of protein and fermentable carbohydrate in the food. If alkaline, the fatty acids unite with the bases calcium and magnesium to form soaps. These soaps are not irritating, peristalsis is not hastened, and the babe tends to be constipated. If, on the contrary, the sugar content of the food is high and acids predominate in the intestine, the fatty acids remain unneutralized and stimulate peristalsis, provoking more frequent stools, or diarrhea.

Let us consider the case of a babe three months old, brought in without a history, and for whom it is impossible to obtain breast milk. The first problem is to determine the babe's tolerance. I do this in the following way:

I know that a normal babe of that age will, as a rule, take in the neighborhood of about 15 ounces of whole milk daily, provided it is properly diluted. I also know, from experience, that a healthy babe of that age takes milk which is diluted with an equal amount of water. So that without hope of achieving a gain in weight, I order for that babe about 5 ounces of half milk and half water, to be given five or six times in the twenty-four hours, and tell the mother to return in two or three days. This is done simply to determine the babe's ability to tolerate one-half milk. If when the mother returns with the babe I find, as I supposed, that it is not only hungry but constipated, I then make a carbohydrate addition. Ordinarily at this age the addition consists of about one tablespoonful of barley flour. Then, if the babe is constipated, but does not gain, further carbohydrates may be added. Usually I add some form of sugar, either cane sugar or lactose, or one of the mixtures of maltose and dextrin that are on the market.

As regards the amount of milk needed by these babes, it will usually be found that the babe will thrive on about one-tenth of its body-weight in milk a day, and as regards the amounts given at separate meal-times, approximately two ounces more are given than the babe is old in months. It so happens that such an amount of milk and

water furnishes about 70 calories per kilo of the babe's weight per day. Most artificially fed babes will not gain on that quantity of food, and it is only when the lacking 30-40 calories per kilo are made up by carbohydrates that gain in weight recommences. I have purposely left the question of calories until I have begun with this concrete example of a feeding case, because I feel that one should use his knowledge of the energy content of various foods as expressed in calories, not as a method of feeding, but as a method of checking, in order to determine reasons for gain or failure to gain.

Let us return to our three months old babe, and let us suppose that, when the mother came back two days after I had first seen her and put the babe on his 5 ounces of one-half milk and one-half water every four hours, she had brought with her a diaper containing a slimy, green stool, containing small, white or grayish masses and had told me that the babe was passing five and six stools daily, showed me the babe's red buttocks, and further stated that the babe was crying and fussy all the time, I would know beyond question that the food he was given was beyond his ability to tolerate. And because the mixture had already contained a minimum amount of milk and had contained no added carbohydrate, I would know that, for the present at least, it was impossible to feed that babe with the simple milk mixture. I would then give protein milk. Protein milk was originated by Finkelstein under the name of "Eiweiss" milk, and, in the hands of many men throughout this country, it has proved its worth over and over. It is made as follows¹:

"1 quart milk,

"Digestive ferment,

"1 pint buttermilk,

"2 level tablespoonfuls wheat flour,

"1 pint water,

"Dextrimaltose as directed.

"Heat 1 quart of fresh whole milk to 98° to 100° F., then add 2 level tablespoonfuls chymogen powder or essence of pepsin (1 teaspoonful) or a junket tablet (previously dissolved in a little cold water); place in a water-bath of 107° F. for fifteen to twenty minutes until coagulated; and then hang in a sterile muslin bag one hour to drain off the liquor of the milk.

"To the curd of 1 quart of milk thus obtained add 1 pint of buttermilk, and rub through a copper hairstrainer three times. To this add 2

1. Abt, I. S.: The baby's food, Philadelphia, Saunders, 1918, 37-38.

level tablespoonfuls of wheat flour rubbed to a paste with 1 pint of water. Boil the mixture ten minutes, cutting back and forth constantly, not stirring, with a large wooden spoon; otherwise large curds will form. If necessary add water to make the finished mixture 1 quart.

"Dextrimaltose (3 to 5 per cent) should be added when directed by the physician. The early addition of 3 per cent of dextrimaltose is advisable. This is best done by dissolving the dextrimaltose in a moderate quantity of water and adding while the mixture is boiling. The albumin milk must not be overheated before feeding, as it will curdle."

You will note that the mixture is rich in protein, moderately rich in fat, and poor in carbohydrate. Alkaline intestinal contents, soap stools, and constipation should, and do, result from its use. Furthermore, its salt content is relatively low, a factor which may be of great importance. Its production entails a certain amount of work on the part of the mother or nurse, but either can be taught to make it successfully. A knowledge of the manner of preparation and the indications for its use cannot but be among the most valuable possessions in the doctor's therapeutic armamentarium. I have tried skimmed milk and buttermilk, starch solutions, and evaporated milk, but, when a babe has diarrhea of purely alimentary origin, when it can take no other artificial food, the chances are that by the use of protein milk the babe can be fed and kept constipated. We will suppose, then, that the mother is instructed in the use of protein milk, told to put the babe on the 5 ounces five times a day with an addition of 3 per cent of carbohydrates, which I make in the form of Mead's dextrimaltose, usually she is apt to return with the news that the babe is constipated, and then we will cautiously increase the amount of dextrimaltose, raising it from 3 to 5 and 7 to 9, 10, or even to higher percentages, such as 12, with protein milk. As long as the babe remains constipated and is not gaining sufficiently, it is safe to make these carbohydrate additions; and by them one will nearly always eventually secure, not only a gain in weight, but also a plump, firm, solid infant. Some weeks, and even months, later, when the babe has increased his tolerance for food, the protein milk may be stopped, and a milk mixture suitable to the babe's needs may again be tried.

Let us return once more to the day when the mother comes back to the office after having her babe on the diluted milk for two days. We will suppose that, instead of diarrhea, the story is of

vomiting. Such cases are rarer than the one I have just presented. But when this is the case, when the babe's trouble is that he vomits and fails to gain on the diluted milk, the best artificial food I have found is the old-time Holland mixture of buttermilk, flour and sugar, with which you are all, no doubt, more or less familiar. A few babes begin to vomit on this, and when they do it has to be discontinued. But in general this food, which is largely a carbohydrate one, is well tolerated by the infant's stomach, and with it a fine gain in weight, a comfortable babe, and a pleased mother may be obtained. If the babe has diarrhea on this, I try the protein milk. The buttermilk mixture should not be continued for a great length of time. In common with mixtures containing large amounts of carbohydrates, such as the sweetened condensed milks, Imperial granum, etc., its continued use leads invariably to anemia, to rickets, and to lessened resistance to infectious diseases. In general, I use only these three classes of bottle mixtures for the healthy young infant. Boiled whole milk diluted with cereal gruel or with sugar solution, or both, protein milk with from 3 to 12 per cent of dextrimaltose and buttermilk, made up with from 1 to 3 tablespoonfuls of flour and 2 to 4 tablespoonfuls of sugar to the quart. At the present time in New York City the unsweetened evaporated milks are employed a great deal in feeding babes who do not tolerate simple dilutions. I have tried evaporated milk, and have found it to work well in some cases, but I do not think, on the whole, it is as good as the protein milk, its advantage being that it is more easily prepared. I must again emphasize that the feeding of each individual babe is a problem in itself, that one can lay down no empirical rules, saying, for instance, that all artificial feeding of babes should begin with one-third milk and two-thirds 8 per cent sugar solution, or that it should begin with a percentage of 3 per cent of fat, 6 per cent of carbohydrate and 1 per cent protein. But, nevertheless, one does employ a sort of rule of thumb basis for his calculations. If the babe is normal,—by that I mean that its weight is approximately the average for its age, that it has been born at term, and that its parents must have been neither too young nor too old,—it is usually safe to start out in the first month with a proportion of 1 part of milk to 2 of water, and in the second and third months, with equal amounts of milk and water, and after the first four or five months to employ, instead of one-half milk and one-half water, a mixture of two-thirds milk and one-third water as a starting-

point. Regularity of feeding-time is much more necessary in artificial feeding than in breast-feeding. My own experience leads me absolutely to favor the four-hour interval with no more than five or six feedings in the twenty-four hours for the artificially fed babe. When its food is tolerated and is physiologically adapted to the infant, I have been able to show that hunger, as evidenced by the gastric contractions, does not become intense until the end of the four-hour period. On the contrary, in babes who were being fed every two or three hours, who were receiving more food than they could tolerate, hunger occurred at the end of one and one-half hours, and two hours, often before the stomach was emptied. This coincides with the clinical observations that the fussy, crying babe is more apt to be overfed than underfed.

Increases in the amount of food given the babe should not be made simply because it cries, nor should they be made if the babe has more than two or three loose stools daily. Increases should not be made as long as the babe is making a satisfactory gain in weight. The amount needed by the infant gradually increases during the first six months, and, if the amounts of a well-tolerated food are not increased, the weight will come to a standstill; therefore the best method is to watch the babe's weight, the stools, and their character, and, if possible, the temperature. This latter, which is always between 98-99° in a normal, young infant, becomes irregular if food is not tolerated. When, however, the weight curve flattens out in a babe who is receiving a well-tolerated food and who is apt to be passing

fewer stools than before, an increase in the amount of food is indicated. Increases should be made gradually. At the end of the first month one can go from 3 ounces of one-third cow's milk with 8 per cent sugar solution, to 3 ounces of one-half milk and one-half 10 per cent sugar solution. About the second month, usually, the amount per feeding may be increased to 4 ounces, and in the third month to 5 ounces. At about this time a cereal solution, such as barley water in addition to the milk and sugar, may be employed. In the fourth and fifth months usually three-fifths or two-thirds milk may be used. Orange juice should be given daily to these babes after the second month. In the sixth or seventh month I begin giving a thicker cereal, usually using the same one with which the mother is diluting the milk; then add zwieback, rusks, or toast, then vegetable soup, vegetables, fruit pulp, and at the end of the first year a little scraped beef. These increases are made slowly, the principles being that a new food should be used in only teaspoonful quantities, and that two new foods shall not be begun on the same day. In general, during the second half year the babe takes about 24 ounces of milk with fruit, cereal, and vegetables, in gradually increasing amounts.

It is difficult to speak on artificial feeding of the normal infant because the transition between health and intestinal disease in the unnaturally fed infant is gradual. Certainly, all bottle-fed young infants should be treated prophylactically, and only by having them seen and studied by the doctor at regular intervals can they be kept approximately safe.

SOME TUMORS OF THE NECK*

BY EARLE R. HARE, M. D., F. A. C. S.

MINNEAPOLIS

There is no other area in the body so frequently invaded by tumors as the neck. This fact is largely explained on anatomical grounds. In the very early embryonic life, four grooves appear in the ectoderm of the head end, and, a little later, four corresponding outpouchings develop in the pharyngeal endoderm directly opposite them. The ectoderm and the endoderm approach each other, and fuse, forming a thin plate, which normally remains intact, and so separates the pharyngeal pouch from the external sur-

face. These grooves are spoken of as the *branchial grooves*; and the pouches as the *pharyngeal pouches* or *grooves*.

On either side of each groove is a thickened mass of mesodermal tissue, which separates them, and contains nerves and blood-vessels. These are the branchial or visceral arches, and are five or six in number. They are designated the *mandibular*, the *hyoid*, and the *branchial arches* proper. I, II, and III. From them, many of the important structures of the face and neck develop. The first cleft is known as the *hyomandibular*. The tympanic cavity develops in rela-

*Read before the Western Surgical Association, December 14 and 15, 1917.

tion to the first pharyngeal pouch; the palatine tonsil and sinus tonsillaris, in relation to the second; and the ductless glands, the thymus, and the parathyroids, and the lateral thyroids, in relation to the third, fourth, and fifth.

The thyroid vesicle develops in the median line near the base of the tongue, and connects with a hollow stalk, which becomes obliterated normally in embryos of 5 mm. When the hollow stalk fails to close, it remains as the thyroglossal duct, and it passes from the foramen cecum, at the base of the tongue, downward and forward, crossing, or piercing the hyoid bone to the thyrohyoid membrane. The ductus branchialis is the duct-like remains of the second external branchial groove, and it is obliterated normally in embryos of 9 mm.

The presence of a large number of lymph-nodes, and the two failures of development in the region of the visceral arches, account for most of the tumors of the neck. There are many important structures in this region, but their unusual accessibility greatly facilitates the treatment of pathological conditions.

The tumors to be discussed fall into two general classes,—namely, (1) primary and (2) secondary. Among the primary tumors mentioned are (a) Hodgkin's disease (lymphoblastoma), (b) carcinoma of the skin, (c) branchiogenic carcinoma; and among the secondary tumors are (a) carcinoma of the lymph-nodes, (b) tuberculous lymphadenitis, (c) thyroglossal cysts, (d) branchiogenic cysts, (e) lipomata, (f) sebaceous cysts, and (g) fibromata.

Hodgkin's disease involves usually the glands of the neck, first on one side, and then on the other, and spreads progressively to other groups of lymph-nodes. (See Figs. 1 and 2.) The en-

investigators insisting that it is the result of direct bacterial invasion. Mallory states that it is most often a lymphoblastoma of the slowly growing scirrhus type.

The condition may be easily confused with a tuberculous process, and the diagnosis is most surely made by microscopic examination of the involved glands. (See Figs. 3 and 4.) Some

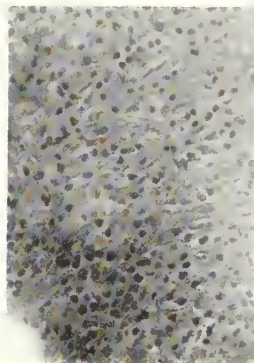


Fig. 3. Photomicrograph, Hodgkin's disease showing characteristic cells of the lymphoblast type. Reticulum well marked.

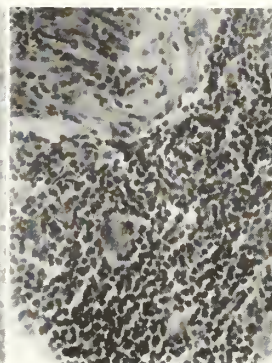


Fig. 4. Photomicrograph. Tuberculous lymphadenitis.

credence may be given the bacterial theory, when we contemplate the marked temporary relief seen in one reported case, accidentally infected with streptococcus erysipelatus, and a second remission of all symptoms, following a second similar treatment; but this patient finally died, following a third involvement and a failure to respond to the same type of treatment previously given.

A personal observation may be of interest. Mrs. F., aged 60, who had previously suffered from tic douloureux, involving the mandibular branch of the 5th nerve, and completely relieved by resection of the offending nerve, presented herself with greatly enlarged cervical lymph-nodes of ten weeks duration. The enlargement began on the left side, and more recently appeared on the right. There are now some pain and a mild degree of temperature. Microscopic examination of the involved nodes gives a typical picture of Hodgkin's disease: no growth from cultures. However, marked improvement followed immediately after the administration of a mixed bacterin. The improvement continued over a period of several months, but the patient later died of a recurrence.

Carcinoma of the skin of the neck is of infrequent occurrence. When present the tumor partakes of the usual characteristics of carcinoma, and is very hard, nodular, and superficial, and should be easily diagnosed.



Fig. 1. Hodgkin's disease, showing enlarged cervical lymph-nodes, both right and left.



Fig. 2. Hodgkin's disease subsequent to treatment.

largement of the glands is essentially chronic. There is much discussion as to etiology, some

Branchiogenic carcinoma develops from the epithelium of the walls of a branchiogenic cyst, and presents a difficult problem in diagnosis. The tumor arises in relation to the second branchial cleft, and lies just below the mandible and anterior to the sternocleidomastoid muscle. The tumor is hard and frequently accompanied by pain. It must be diagnosed from:

Lymphosarcoma, tuberculous lymphoma, congenital serous cyst, and actinomycosis.

This tumor should be recognized early, and treated radically, for the condition is a most serious one, accompanied by a very high mortality. McKentry reports 100 per cent in five cases at the Royal Victoria Hospital, covering a period of fifteen years.

Primary growths in the glands of the neck are rare, but secondary growths are frequent. Lymphogenous lymphadenitis occurs through the afferent lymph-vessels. It is the most frequent type of involvement, and is usually localized. Hematogenous lymphadenitis occurs through the blood-stream, is usually general, and is of infrequent occurrence.

Secondary carcinoma of the lymph-nodes usually follows malignancy in the floor of the mouth or the lip, and partakes of the usual characteristics of such involvement. The diagnosis should not be difficult after careful examination and locating the primary lesion elsewhere.

Tuberculosis of the lymph-nodes of the neck is second only in frequency to pulmonary involvement. (See Figs. 5 and 6.) The atrium of in-

it at once; still the diagnosis of this condition is not always easy. Involvement of the submental glands may simulate a thyroglossal or a dermoid cyst; or enlargement of the submaxillary nodes may be mistaken for a branchiogenic cyst or a carotid tumor. Consequently, where an isolated group of nodes is involved in a slowly developing process, a most painstaking study may be required to reach a correct diagnosis.

The treatment of this condition involves a wide divergence of opinion. In so much as the area is accessible, and the condition considered local, complete excision, together with the usual hygienic treatment, seems to be the most rational. Decided benefit is seen in the use of minimal doses of tuberculin preceding and following excision. (See Figs. 7, 8, and 9.)



Fig. 7. Branchiogenic cyst at the angle of the mandible and anterior margin of the sternomastoid.



Fig. 8. Branchiogenic cyst.



Fig. 5. Tuberculous lymphadenitis. Extensive involvement.



Fig. 6. Tuberculous lymphadenitis. Well localized, simulating branchiogenic cyst or carotid tumor.



Fig. 9. Thyroglossal cyst overlying thyroid cartilage.

fection usually is found in the mouth. The mucous membrane or the lymphoid tissues receive the bacteria, and pass them along to the lymph-nodes where multiple miliary tubercles develop, resulting in the destruction of that node and a further involvement of contiguous nodes.

This picture is so familiar that you recognize

The consideration of thyroglossal and branchiogenic cysts is very interesting. Failure of development in early embryonic life is responsible for both thyroglossal and branchiogenic cysts and fistule. A thyroglossal cyst first appears as a small, rounded tumor in midline between the larynx and the hyoid bone. It is of slow development, and the patient may be entirely free from distressing symptoms for a long period of

time. As the tumor increases there are gradually increasing hoarseness and dyspnea, due to pressure on the supralaryngeal tissues. It is quite possible in most cases to dissect out the tumor entirely, but, where the duct remains open in its entire length, the dissection leads upward across or through the hyoid bone to the obliterated foramen cecum at the base of the tongue, and presents real difficulties.

The diagnosis is not always simple. The condition may be confused with a dermoid or an aberrant thyroid. All of these tumors enlarge slowly, and they cause some difficulty in deglutition. There may be a dry irritative cough, a gradual impairment of the voice, an absence of pain and no attachment to the overlying integument. Should the aberrant thyroid become cystic, the diagnosis may remain speculative till the time of removal.

Branchiogenic cysts are likewise of slow development. They may appear very soon after birth, or not for many years. These cysts develop in relation to the second branchial cleft, and are present when the ductus branchialis fails to close. The inner end of the duct is near the sinus tonsillaris, and it passes outward across the posterior belly of the digastric, between the internal and external carotid arteries, across the great cornu of the hyoid bone to a point immediately beneath the deep fascia, platysma, and integument.

The slow dilatation of this duct results in the formation of a cyst, which appears immediately beneath the margin of the mandible, anterior to the sternocleidomastoid muscle.

These tumors are essentially congenital, though they may not appear for many years. They present two real problems: first, diagnosis; second, removal. They may cause very slight inconvenience for a long time, the chief disturbance arising from pressure as the tumor enlarges.

The diagnosis is of interest. Differentiation must be made from—

1. Retention cysts, due to closure of Wharton's duct.
2. Lymphangiomas.
3. Thyroid cysts.
4. Sebaceous cysts.
5. Lipomata.
6. Tuberculous glands.
7. Abscesses, deep lying and slowly developing.

The position of the branchiogenic cysts is

rather constant and characteristic. They are not attached to the overlying skin, but are firmly attached on the mesial side. They are semi-fluctuating and freely movable beneath the skin, and, owing to their deep attachment, cause a distinct tugging on the tonsil when outward and downward traction is made.

In lymphangiomas the walls are less tense; thyroid cysts usually lie more distal and more beneath the sternomastoid muscle; the sebaceous cysts have a definite attachment to the skin; the lipomata are lobulated and without deep attachment; tuberculous glands usually are more firm, and accompanied by perilymphadenitis; the presence of pus in abscesses may be shown by aspiration.

The treatment is entirely surgical, and consists in complete removal. Owing to the course of the branchial duct, the dissection must be carefully made in order to avoid injury to deep-lying and important structures. In some cases it becomes necessary to complete the removal of the duct through the mouth.

The diagnosis of sebaceous cysts and lipomata will offer but little difficulty if the almost constant attachment to the overlying integument of the first and the lobulated condition of the second, be remembered. (See Figs. 10 to 14.)



Fig. 10. Fibroma durum. Recurrent, showing enlargement on the left side of the neck with slight torticollis.



Fig. 11. Fibroma durum. Tumor enlarged; torticollis more marked.



Fig. 12. Fibroma durum. Tumor enlarged; lateral deviation of trachea and esophagus.



Fig. 13. Fibroma durum. Tumor at maximum; marked deviation of trachea and esophagus; some emaciation.



Fig. 14. Fibroma durum. Tumor has entirely disappeared.

Fibromata are rare, and mention of them is made in order that the following most interesting and unusual case may be cited:

A little girl, aged 6 months, American, was presented at the clinic. She had what appeared to be a typical branchiogenic cyst of the left side. After careful examination the tumor was so diagnosed. It had appeared when the child was but a few weeks old. Owing to the extensive dissection required for its removal, and the absence of distressing symptoms, expectant treatment was advised. Six months later the child was again presented at the clinic, the diagnosis confirmed by a confrère who advised operation. The operation was, of necessity, incomplete, owing to the extent of the tumor, and the posterior capsule was left. The microscopic examination showed a typical fibroma durum, an essentially benign tumor.

There was an immediate recurrence of a rapidly growing tumor, which was now more firm than before. The diagnosis was now sarcoma, and a lethal prognosis given. The tumor grew to enormous size, at first displacing the trachea and esophagus two inches or more to the right. Starvation seemed imminent owing to pressure, dysphagia, and dyspnea. The tumor then grew across the trachea, and equalized the pressure sufficiently to permit of improvement in breathing and swallowing. At this most critical stage, the little patient suffered a severe attack of measles. A marked hemorrhage occurred into the tumor. It softened in several areas, and from that time began to decrease in size. The tumor gradually disappeared and with it the symptoms. One year ago a staphylococcal abscess appeared in the same side of the neck in the supraclavicular triangle. The abscess was drained, and promptly closed; and today the child is in perfect health, with nothing but a slight torticollis to remind one of her former trouble.

CONCLUSION

First—Careful, painstaking study of these cases will usually lead to a correct diagnosis.

Second—The same care exercised in the treatment will usually result in a cure.

DISCUSSION

DR. EMIL G. BECK (Chicago, Ill.): I want to say a word or two about the diagnosis of Hodgkin's disease. In these cases we find that very often there are additional tumors in the chest, and, therefore, we take

röntgenograms of the chest in all such cases. Furthermore, we ought to find the diphtheroid bacillus in true Hodgkin's disease. It may not be found for the first time. In the cases I have seen, we have found it.

We now rarely operate on tuberculous glands of the neck. In most cases they originate from the tonsils, and we have found that after removing the tonsils these tumors have disappeared without operation in a great many instances. Following the removal of the tonsils we have used to a great extent "deep therapy," and have found it of great advantage. Those who do not believe in deep therapy have not tried it. The literature furnishes us with enough evidence of its value from reliable clinics, especially from Switzerland. We have not operated in these cases for years, and have gotten the most satisfactory results.

I wish to mention a peculiar incident in one case of my brother, Dr. Joseph Beck. He was called to the Michael Reese Hospital one day to see a case in consultation. The patient, a woman, had a large tumor in the neck and also diseased tonsils. The surgeons wanted to know if the tonsils were responsible for the tumor in the neck. The telephone operator who took the message, through a misunderstanding, said that my brother should come prepared to operate on the patient. The two surgeons not being present when he arrived, he ordered the patient to the operating-room, an anesthetic was given, and he removed the tonsils without the surgeons' knowledge. They were at first horrified, and very much alarmed; but later they were very much satisfied because the tumor in the neck had gradually but entirely disappeared.

In the case which Dr. Hare related, where the tumor disappeared after measles, the case was undoubtedly one of infection. If it was sarcoma it is not absolutely known to be non-infectious. It is known that one infection may kill another infection. This was demonstrated to me last summer when a man with malarial fever, which had persisted for years, was so sick of himself that he decided to commit suicide. I had him under my care in the hospital for two or three weeks, and then he went into another hospital for several weeks. When he found that he could not be cured, one day last summer he attempted suicide by gas-poisoning. I was called two hours after it happened, and his condition was so precarious that I did not think he would recover. He was very cyanotic and had pulmonary edema. We put him on a porch in the sunlight, and, as I learned later, he recovered consciousness in twelve hours. After four weeks later I saw his wife, and asked her about her husband, thinking that he had died; and she said, "He is fine." I sent for him, and found him in a perfectly healthy condition; he had gained twenty pounds in weight.

Is it possible that gas-poisoning may be a cure for malarial fever? (Laughter.)

DR. E. S. JUDD (Rochester, Minn.): Dr. Hare has called our attention to a difficult lot of cases to treat. There are one or two points about thyroglossal-duct cysts that I would like to mention. We have had great difficulty in curing these cases, and undoubtedly that has been the experience of other surgeons. A few of the patients we have operated on had been operated on by others several times previously. Dr. Seelig has suggested that the hyoid bone in developing after the thyroglossal duct may include the duct in it. In the cases in which the duct seems to be closely associated with the hyoid

bone we resect a small piece of the bone with the duct. We are curing more patients now than we did formerly. Seelig mentions that the thyroglossal duct has diverticula branching out from the side of it, and the mere removal of the duct itself leaves a small diverticulum on one side or the other, and recurrence takes place. The dissection in these cases should include more than the duct itself. The fascia and all the tissue in between the muscles should be removed.

We have been impressed in the last few years with the fact of seeing fewer cases of tuberculous glands of the neck as compared with some years ago, and the only explanation we think is to be found in the much more thorough prophylactic treatment,—attention to the tonsils, better hygienic treatment, and so on. Formerly, we operated in a number of cases of tuberculous glands of the neck every week, but now we rarely see one.

I have recently operated on one of the largest fibromas of the neck I have ever seen. The patient was a man, aged 50, who had had this tumor for ten years, during which time it had gradually increased in size. He had a tracheotomy done two or three years ago. He was hardly able to breathe, and the operation was done as an emergency procedure. The only way he could get food down the esophagus was to crowd it down with the finger. The tumor was encapsulated, and was removed quite easily. He was able to swallow immediately after the tumor was removed. The operation was made through an incision in the neck without opening the pharynx, and the stenosis of the trachea was entirely relieved.

DR. HARE (closing): I mentioned the fact that there is considerable controversy with reference to the etiology of Hodgkin's disease. It looks as though it might be a definite infectious disease. I think the work of Bunting and Yates has come nearer proving the definite infectiousness of the disease than the work of anybody else with which I am familiar or have seen. I do not believe that the tumor in the little girl was an infection. Why? Her temperature and pulse were always normal. There was no evidence of local inflammation, and with a tumor of the size that she presented, if it were due to an infection of ever so low a grade, it would, at the same time, furnish evidence of a localized infection, and that was not present.

With reference to the point made by Dr. Judd concerning the difficult removal of thyroglossal cysts: I did not mention in my paper the fact which is well known and noted in the literature, namely, in many instances the thyroglossal duct penetrates the body of the hyoid bone, which must be explained by the fact that the hyoid bone develops around the thyroglossal duct. In these cases it has been found necessary, in order to cure the condition, to either resect a portion of the hyoid bone or, as one surgeon has advised, splitting the bone, gouging out the cyst, and then closure of the bone. Of course, if the duct passes over the bone, there is no necessity for resection of it, but in the cases where it passes through there will be recurrence unless every particle of the epithelial lining of the duct is removed.

ADDRESS OF WELCOME TO THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION*

BY THE HONORABLE PETER NORBECK
GOVERNOR OF SOUTH DAKOTA

Mr. President, Ladies and Gentlemen, and Members of the South Dakota State Medical Association:

I was glad to receive an invitation to come down here and meet with you. I wanted to get better acquainted with you. I wanted to thank you for the good work you have been doing, and to ask more of you. I thought this would be a good time to do so.

The medical profession becomes of increasing importance with the passing years, and, of course, this is an unusual year. When I see a doctor who has served upon the exemption boards I feel almost like apologizing to him, for I did not realize when I put him to work last spring how much of a job it was going to be. If I had known beforehand I might have changed them off, and divided the time so that each of them could have served part of the time. I

know there are a good many of them who have absolutely given up their private work, and put in their whole time on the exemption boards, while others have contributed less.

There are many things beside that before us; and I want to ask your increased interest in a few other matters while you are here, especially in the state institution at Custer, the State Tuberculosis institution. We have been apologizing for it for seven or eight years, because it was small and the waiting-list large, and because the appropriations were inadequate, but I think we have reached the point where there is more room there. Certainly there will be a great deal more room for additional patients before fall.

But that is not what I was going to speak particularly about. I was going to ask each one of you to take the matter up with your member of the legislature, and show them the importance of that institution, the necessity and the appeal for it. I am persuaded that the only way we can

* Delivered at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

eradicate tuberculosis in the state is by isolating the patients at an institution of that kind. We have really a wonderful start. The last legislature was really the first one to make a liberal appropriation. The superintendent in charge is here with you, and I wish you would talk the matter over with him personally, because he can give you detailed information.

Then here is the army. Doctors are the crying need, a dozen here and a dozen there. If there was a classification of doctors as of soldiers, it might be simplified a great deal, because the Government by the regulations which they have laid down for soldiers aims to take those who are best qualified to go, and those who can best go. It is harder with the doctors. There are a number of them who cannot go. The public may not understand that, and if they were classified by number there would be an official record to establish the fact. Here are others who feel that somebody should go and enlist, and who go when, it may be, they are not the ones who should leave their work. A great many of the members of the profession here have spoken to me about that matter, and asked if something cannot be done. The State cannot do anything officially in this matter. It would have to be done semi-officially. Perhaps the Federal Government will take care of it. It will have to if doctors cannot be gotten in some other way. But, if this Association should feel that the State ought to take it up, and put its official stamp on it, I suggest to you that it might be done through the State Council of Defense upon the recommendation of this body, or by such a committee as may be appointed at this meeting. Certainly, the State Council of Defense or any other organization in the state would attempt to classify the doctors, and see who could best be spared, and who should stay at home, because that is a matter in which the recommendations would have to come from the members of the profession who know the circumstances of each individual and the conditions under which he is working.

We are all behind the one work and task of winning the war; and certainly one of the most important things for us to do is to give decent care and treatment to the boys who have enlisted and who are sacrificing their all. We cannot be put in the position of saying to the boys who are wounded, "We are sorry for you, but we cannot help you. You will have to get along the best you can with those in reach or out of reach."

If we are to win the war we have got to at-

tend to every detail of it. It has got to be a fight all along the line. It is easy to say that this or that will win the war. We may say that food will win the war, but food alone cannot win it. You cannot win it without soldiers; and soldiers without proper care and attention cannot do their best. That is impossible. And so I am appealing to you to take this matter up seriously, discuss it in your meetings, and suggest something.

We did not want the war; of course we did not. We hope we are not always going to have it. We are not a military nation. It is peace we want. The only question is how to get it. We did not think we would ever have a war in America, certainly not a world-wide war; but, while Germany was preparing, we were asleep. We were told some twenty-five or thirty years ago that Germany was getting ready for something, because they were preparing on a big scale, and that even in the text-books they taught that Germany was to rule the world with sword and fire. That idea was foreign to us. We did not teach any creed like that in our schools. A number of years ago when a German prince was here someone asked him about this, and he then said wait until 1915, and we laughed again, because we thought that that was preposterous. And ten years ago a German military leader wrote a book telling about how to conquer America, and what armies and navies would be required, and what tribute would be levied upon us; and we laughed, and laid the book aside. And so we were unprepared; and many mistakes have been made, all of which takes time to correct.

Of course, war has changed. It is not such an affair as it was fifty years ago. It has settled down to a question of hard work, of bringing up the larger number of trained men, and bringing up supplies, and the country which can put the largest and best prepared armies in the field is going to win the war.

You hear some Germans say that they did not want the war, that England was the trouble. We know now what we did not know then, that Germany asked England to keep her hands off while she invaded France. The German people may think that it is a war of defense. Perhaps they thought so in the war with France some fifty years ago, but Bismarck confessed before his death that he brought that war on because they needed the iron mines of Alsace and Lorraine. They threatened war with Denmark because they wanted a place for the Kiel Canal. Then they say it was the murder of the Austrian prince which brought it on. We know now what we

did not know then, that Austria asked Italy to keep her hands off until she could invade Serbia, and asked this a whole year before the prince was murdered.

It is a question of ideals now. The first question is, Who is going to rule? Shall somebody rule the world? The pacifist says, "Let us compromise, and settle it. Let us keep out of it." We might as well try to compromise with a burglar who is entering our house. We might as well tell the burglar that he can have half if he will go away. And he will take it, and he will come back after the rest. And so with the Kaiser: if you tell him that he can have half the world, he will come back after the other half. (Applause.) The ambition of a man who wants to rule the world cannot be compromised with. It has got to be crushed, and crushed in such a way that he will never spring up again. This world cannot afford to have any more Alexanders or Napoleons or any more Kaisers. They do not fit in with our modern ideas. (Applause.)

The load will fall upon America. We are not going to try to shirk our responsibility. Our idea has been peace, and to try and bring peace into

the world. We cannot do it with peace treaties. That has been tried. Germany has referred to solemn treaties as scraps of paper. We will say to them, "You have got to keep your treaties; you must make good. We will never treat with you until you have made proper reparation, and gotten clear out of Belgium."

And we owe it to France. When the American colonists were in trouble, it was France who came to our rescue. The finest thing that General Pershing said when he and his officers and men reached there was, as they marched up to General Lafayette's tomb: "We are here to do for your people what you did for us, General Lafayette. You saved America. We have come to save your country." And that is the kind of spirit that is going to take our boys through. We do not want territory or money. We are trying to bring about better conditions in the world. This war must and will go on to a finish. The boys have plenty of our spirit in them. They understand it clearly. The whole question is of our backing them up as we should. Let us not fall down in any respect. (Applause.)

KIDNEY INJURIES*

BY G. G. COTTAM, M. D., F. A. C. S.

SIoux FALLS, SOUTH DAKOTA

Kidney injuries cover a wide range. They can be of any type, from the very simplest to the most elaborate. We do not know exactly the condition in these injuries because, in the very nature of things, the extent of trouble cannot be accurately diagnosed, but we may safely assume that, in a certain percentage of injuries to the abdomen in which certain symptoms of kidney injuries occur, and which recover under expectant treatment, there has been, at least, a contusion of the kidney substance, not to the extent of causing secondary symptoms, but sufficient to cause some of the suggestive symptoms, such as mild hematuria.

From this on to the really severe grades of kidney injury, occurs a rather sudden transition. We get pretty quickly up into the character of cases in which there is a kidney rupture. That is the class of cases I have to speak of this morning.

Kidney injury of this grade is not, however, a

common thing. I will take the liberty of reading a very few lines from a recent paper of Judd's, covering this point, in which he speaks of Kuster's experience at his clinic, with 7,740 injuries, in which he reports 10 cases of injury to the kidney, that is, taking cases that were absolutely confirmed.

"Israel, in his large clinic in Berlin, has had but one operative case. Keen's analysis of 155 so-called injured kidneys shows that 118 were subcutaneous ruptures, and 2 were ruptured ureters."

Judd goes on to say that in the Rochester series of cases he was able to find 10 injuries to the kidneys and ureters, and in 8 of them operation was done and the diagnosis was confirmed. The other 2 were diagnosed clinically only, as the patients recovered without treatment. Thus you can see readily that if men of large experience can report only a mere handful of cases, it cannot be a very common occurrence.

In spite of this, I take the liberty of speaking on this subject this morning because, when a

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

case of this character does occur, it is of the utmost severity and demands the clearest thinking and the coolest judgment as to what needs to be done.

You should recall, incidentally, the anatomical features under which the kidney may be injured. The kidney lies in a pretty well protected bed, protected behind by solid tissues, which can surely stand a fair degree of injury without being transmitted to the kidney itself; and in front the whole abdominal cavity and the abdominal walls protect it. My theory is that it takes a peculiar type of injury to rupture the kidneys; that is, it is difficult from an ordinary simple contusion in which perhaps a man sustains a general injury to the abdomen, as, for instance, would be transmitted to the abdomen by a large force. It must be a localized injury, and it must catch the man, to a certain extent, unexpectedly. If one man is struck by a large body, or falls on the abdomen, or is struck by a large body like the side door of a moving train or anything of that kind, the chance of being injured would be very slight; but, if a localized moving body or vulnerating body of small size, were to strike the man from in front, especially unexpectedly, with the abdominal walls relaxed, then the chances for kidney injury must increase. I have had four cases, and in every one of them, as you will notice when I come to talk about them, you will see that the kidneys were in each case injured by a small body.

The first case I have already reported. I have a report of it from which I will quote briefly.

This was a woman, aged 30, a married woman, living near Pipestone, Minnesota. The family history is negative. The patient had a severe fall in 1894. It was in 1905 that I saw her. She had had a severe fall in 1894, striking the left side of the abdomen forcibly against the corner of the seat of a wooden chair. Up to that time her health had been invariably excellent, permitting her to do all kinds of work without discomfort; and there were no alarming symptoms immediately following the injury, but after its occurrence she found lifting or carrying anything heavy would cause pain in the side which had been struck. She was married four years later, and her health remained without marked impairment until the summer of 1904, when there began to be intermittent pain in the left side, low down. Her first and only pregnancy had begun in February, terminating spontaneously at the seventh or eighth month, in October of the same year. During winter and spring she had to

spend a great deal of the time in bed on account of pain and weakness. Her normal weight before marriage was 135 pounds, but afterward and until the summer of 1904 it was about 120 pounds; from then on she gradually failed, weighing 97 pounds at the time I first saw her.

Upon examination I found these symptoms: Skin, pale and sallow, rather moist; tongue, slightly furred; pulse, accelerated (100 to 110); temperature, somewhat elevated. On palpation of the abdomen I found a hard growth about four inches wide in the left upper portion of the umbilical region, immovable and resonant on percussion, which I assumed to be the kidney covered by intestines. The urine was diminished in quantity, concentrated, and turbid from excess of phosphates, with a trace of albumin.

I operated on her the same day, making, to give wide exposure, an oblique incision about six inches long from a point just below the left costal margin, in the anterior axillary line, in the direction of the pubic spine. This, with a sandbag under the back, soon enabled me to verify that the growth was the left kidney, enlarged, softened, and adherent to the bony pelvis. I, therefore, split the outer layer of the mesosigmoid, and, with great difficulty, on account of the universal adhesions, released the kidney, and while doing so observed pus extruding from a sinus situated posteriorly leading to its interior. I then tied off the renal vessels and ureter, and removed the kidney, made a large drainage puncture in the loin, and closed the anterior incision.

The specimen showed all the evidence of an old perinephritis in the thickened and adherent capsule, while internally there was an abscess in the parenchyma, communicating externally. The pelvis of the kidney was uninvolved, but was so encroached upon by the pressure of the abscess, which contained several drams of pus, that the excretion of urine must have been greatly impeded.

The patient made a slow but satisfactory recovery, gradually regaining her weight and strength. On November 21, 1905 (five months after the operation), she wrote that she then weighed 122 pounds, a gain of twenty-five pounds, and was excreting thirty-two ounces of urine every twenty-four hours. On July 6, 1906, she wrote that she felt well most of the time, only suffering somewhat with backache when she did any unusually hard work, but that she was able to do all her housework, and milk three cows morning and night, besides attending to her gar-

den and chickens, without being tired in the least or suffering discomfort.

I attempt to make no deductions from this one case, merely emphasizing that it occurred in a young woman of good health and physique, then a nullipara, and with no assignable starting-point for the lesion other than an injury received eleven years before, and that it was a case of injury to the kidney with secondary infection.

The next case was interesting from a surgical, medicolegal, and psychological standpoint.

The subject of this case was a young man, aged 26, married to a woman with red hair. That may sound inconsequential, but the reason develops a little later. He was cultivating the acquaintanceship of another young woman in Minneapolis, and was preparing to make her a visit when his wife decided that the journey should be interrupted, and, having no command of language sufficient to meet the requirements, she drew upon the resourcefulness of a 32-caliber revolver and shot him in the back. It had the desired effect for the time being. He stayed right there.

The bullet entered about an inch to the right of the kidney, in the line of the spinal column, at the level of the twelfth dorsal, and went apparently straight backward. There was immediately marked hematuria, and the man went into very profound shock. It occurred to me, from the anatomical location, that the bullet might have gone straight through the kidney, and on into the abdominal cavity, probably injuring the duodenum. So, without delay, I made a laparotomy through the Bevan incision, and found that, while there had been no intestinal perforation, there was this interesting condition, and, by hooking one finger of my left hand around the foramen of Winslow, I was able to satisfy myself that there was blood in the lesser peritoneal cavity, and that the bullet had passed on up into the liver without injuring any other abdominal viscus. I thereupon closed the incision in front, turned the man over and enlarged the kidney wound, and found the kidney severely lacerated by the entrance of the bullet. I evacuated the clots and the débris that was found in there, and put in ample drainage. The man made a very good recovery.

A little thing occurred during his convalescence which is of interest, because it shows what may happen in some of these gunshot cases. About January 1, 1907 (he was injured in the fall of 1906), he had a sharp attack of pain in the right side, accompanied by vomiting and fever, lasting

two or three days, which subsided under opiates, etc. Some pus was constant in the urine. About March 1, he had a sharp attack of hematuria, the presence of the blood being verified by the microscope. The bleeding lessened, and was checked in a few days, but the pus continued. On March 14 of that year he had a sharp rise of temperature, up to 102° to 104°, with severe pain in the right side of the back and flank, extending down the right flank, accompanied with vomiting.

On March 16 he passed a piece of his vest from the bladder. This little foreign body had evidently remained in the wound, and had just passed down the ureter and come out.

The next case was that of a laboring man, a Scandinavian, who worked in a planing mill. He fell in such a way as to impinge upon a stick, which projected from the floor, and was used as a switch for controlling a motor. He fell in such a way as to impinge on the right side of his abdomen. This was a typical case of localized vulnerating force. He was in profound shock, which became greater and greater. We watched the patient, and wanted to get him out of the shock period, but he never came out of it. I, therefore, finally did a right lumbar nephrectomy and found a completely ruptured kidney with marked extravasation. The case went on rapidly to a fatal termination.

The last case was peculiarly interesting. A young man, a farm hand, went out into the barn for the purpose of milking the cows, but he had to go past a young colt, and the next thing he knew he was in the hospital. He complained of pain in the right side, and there was very marked extravasation. He passed blood in the urine, and there was unaccountable dullness in other parts of the abdomen.

I saw this patient in consultation with one of my colleagues, and with him I performed an operation. We made an anterior incision first and found a lacerated rupture of the right lobe of the liver, which was bleeding freely. By palpating I was able to satisfy myself that the kidney was ruptured, so we proceeded posteriorly and exposed the kidney, which was completely torn in two. We shelled out the kidney from its bed, and removed it, and then stitched up the deep wound in the right lobe of the liver. The case went on to recovery; but it was interesting as showing the peculiar combination of the liver and the kidney injury, with the confusing symptomatology.

The diagnosis of these cases must rest on several symptoms. First of all, we have the history

of this peculiar type of injury. Then we have the localized pain. Then we have almost invariably severe shock, and a slowly forming and gradually increasing tumefaction in the right or left line, and hematuria, which is fairly constant.

The secondary symptoms, perhaps, in the cases in which there is injury, but not severe enough to cause death, and which are not operated on—in these cases secondary infection may start up, as in the first case reported. In these cases drainage may be instituted, and explorations carried on, but, almost invariably, nephrectomy will have to be done later on. I notice in Judd's series of cases, from which I have quoted, that there were four such cases in which drainage was instituted, but the kidney later had to be removed.

DISCUSSION

DR. F. E. CLOUGH (Lead): I would like to comment on one point that Dr. Cottam made, and that is the infrequency of these injuries. In probably 25,000 injuries which we have had in our service, we have never had a surgical kidney. By that I mean a kidney that had to be removed for injury. We have had a few that have passed blood for a few days, but they showed no signs of organic injury. We have had ruptures of every other organ in the body pretty nearly, but never of the kidney.

DR. E. S. JUDD (Rochester, Minn.): I was very much interested in Dr. Cottam's report of cases. I became interested in this subject about a year ago, and reported on ten cases, which I mentioned in the paper referred to by Dr. Cottam. I was very much impressed, in going over the literature on the subject of kidney rupture, to find, first, what a common lesion it is, and, secondly, how, sometimes, it may be produced by a very slight injury.

The first case we had was a case really of spontaneous rupture of the kidney, as far as I could make out, and I found two or three others reported in the literature, spontaneous rupture of an already pathologic kidney. It was a multiple cystic kidney, and apparently had been functionless for some time.

This particular case was that of a man who got up early in the morning—a man about fifty-five years old. He went downstairs, and was found there some time during the forenoon. He said he had not exerted himself in any way, but had fallen over in a faint in the basement. He was picked up, and brought to the hospital. He was in absolute collapse at the time. About two or three hours after that he started passing bloody

urine, and in a few hours he developed a tremendous tumor in his side. We worked along with subcutaneous salines and transfusions. He was practically pulseless. We got him through the shock: and in forty-eight hours I operated, and found this large pathologic kidney. Just as I freed the kidney—of course it was surrounded by a large hematoma and a good deal of serum at that time—as soon as I freed the kidney, I got a tremendous hemorrhage from the renal artery, so that I was not able to say in that case, while the kidney was ruptured, that it was a true rupture of the kidney, or it might possibly have been, what has been reported elsewhere, an aneurysm of the renal artery, which had ruptured and produced the hematoma.

One other case which illustrates the point of a slight injury producing a ruptured kidney, was that of a woman who got up in the night to attend to one of her children, and, in walking across the floor, stumbled on a little baby carriage. She did not have any local symptoms at all, and had no symptoms of any kind for three or four days, but then she passed a little blood in the urine. Then she was all right for about three weeks, when she showed some rise of temperature, chills, and a little local soreness. When she came to our clinic her kidney was absolutely functionless; and that was one of the cases Dr. Cottam mentioned, in which the ureter had been completely separated from the kidney pelvis.

I think, probably, that lesion is more common than we have had occasion to observe before; at least, I found it in three or four of these cases.

The clinical features in ruptured kidney are practically the same in all cases,—that is, the first symptom is hematuria, which may be great or little. I was glad to hear the doctor say that in their large experience in traumatic surgery, they had so seldom been called upon to operate upon ruptured kidney, because these two cases in our series of ten that we picked up were cases that, very evidently from the history, had had a rupture of the kidney at the time of the injury, because they passed blood freely for twenty-four hours or so, without any local symptoms at all over either kidney, and then all the symptoms subsided, and when the patients came to us it was for something else entirely, and the catheterization of the ureters showed a normally functioning kidney, after apparently having been ruptured.

The first symptoms, apparently, are due to the hemorrhage. But in the after hemorrhage, if the hemorrhage has come from a markedly lacerated kidney, if the kidney is torn in two, if the ureter is torn from the pelvis, or if there is an extensive laceration into the pelvis of the kidney, of course the hematoma that forms from the bleeding is bound to become infected, and such cases will certainly all require nephrectomy.

A CASE OF POST-VACCINATION TETANUS

By J. M. LAJOIE, M. D., and
OLGA S. HANSEN, M. D.

MINNEAPOLIS

The antivaccinationists have pointed to the frequent introduction of tetanus with smallpox virus as a telling argument for their propaganda. The fallacy of this danger is shown in public-health investigations made within the last few years. These public-health workers have shown by case studies, by bacteriological examinations of suspected virus, and by animal inoculations, that the cases of tetanus occurring 15 to 20 days after vaccination are probably due to infection introduced by contamination of the wound about the tenth day, or later, after the time of scab-formation.

The average time of development of symptoms is 20.7 days after vaccination. Death occurred within 7 days in 95 per cent of cases, and in 50 per cent within 48 hours of the onset of symptoms. The mortality-rate is 75.2 per cent, similar to the rate in cases with an incubation period of 10 days or less. This high rate makes it improbable that the incubation period dates from the time of vaccination, 27.9 days before onset; for, as is generally known, a long incubation period means a low mortality-rate.

In view of the high mortality-rate of post-vaccination tetanus, it is especially gratifying to report a case treated by antitoxin and magnesium sulphate injections, resulting in recovery.

CASE

W. L., a boy, aged 9, was vaccinated on the left arm September 10, 1917. Twenty days later (September 30) his mother noticed that the muscles of his face were drawn. The child felt well, and played as usual the next day, but on the third day he complained of pain in his back and arms, and was unable to lie on his face, as was his habit. The boy was seen on the service of Dr. S. Marx White at the Northwestern Hospital on the fourth day after development of symptoms, with spasmodic contraction of arms, moderate trismus, marked opisthotonus, and frequent general convulsions.

The vaccination wound was rather deep with a moderate amount of serous discharge. There was no other mark of possible injury except a slight superficial scratch mark, well healed, on one fore-finger received a week before.

The temperature was moderately elevated and sustained, but never above 101.6° per rectum. The leucocyte count was 23,600 with 83 per cent polymorphonuclears. Cultures and animal inoculation from the wound showed no tetanus bacilli. Lumbar puncture was done for the purpose of giving antitetanic serum, and a normal fluid withdrawn. The next day the puncture was repeated and a cloudy fluid with a cell count of 3,300, 95 per cent polymorphonuclears, was obtained. Two days later the fluid was clear again with a cell count of 57. Serum was injected, and the count went up to 58.9. After a day's interval it was found to be 150, and the last puncture showed 140, after which the serum was discontinued because of decrease of symptoms. After the first two days the lumbar puncture had to be done under chloroform anesthesia because the opisthotonus prevented the introduction of the needle between the vertebral spines.

Feeding was done through a nasal tube, introducing about 1,000 calories a day. Antitetanic serum was given, 10,000 to 20,000 units a day, intraspinally and intravenously. Subcutaneous doses of magnesium sulphate, 25 per cent solution, were given, starting with 15 c.c. and increasing to 30 c.c. three times a day, keeping a hypodermic of calcium chloride always at hand, to use as an antidote if necessary, according to Meltzer's suggestion. Twenty-seven doses of magnesium sulphate were given in the abdomen, thighs, and breast, using the commercial magnesium sulphate. For the most part the solution absorbed rather slowly, leaving no trace except a slight redness for a day. There was no pain following the injection, probably due to the anesthetic effect of the hypertonic solution, and only four of the twenty-seven injections resulted in slowly developing painless abscesses, containing staphylococcus aureus, which healed promptly on drainage.

Urticarial wheals developed on the seventh day after the first antitoxin and lasted two days.

The opisthotonus began to decrease the tenth day after onset, and on the twelfth day the patient was lying normally in bed with only slight rigidity of the arms. No more medication was given and he improved rapidly, but had to wait in the hospital a week while the abscesses on the abdomen and thighs were slowly coming to the point of drainage.

REFERENCES

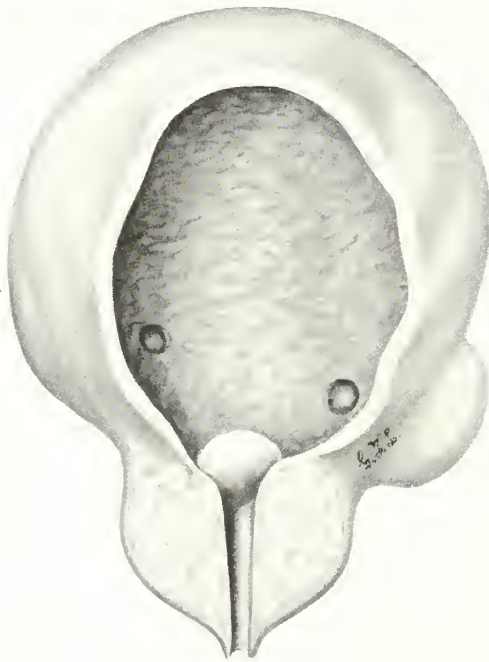
- W. F. Elgin: Amer. Jour. Public Health, vol. v, 1915.
John F. Anderson: Public Health Reports, Reprint 289.
J. C. Geiger: Calif. St. Jour. of Med., vol. xv, No. 5, 1915.

INSTRUCTIVE CASE OF DIFFUSE PROSTATIC ENLARGEMENT, WITH CIRCUMSCRIBED MEDIAL TUMOR AND SACculi OF THE BLADDER

By G. FRANK LYDSTON, M. D.

Formerly Professor of Genito-Urinary Surgery and Syphilology, Medical Department, State University of Illinois
CHICAGO, ILLINOIS

The combination of pathologic changes found in the following case, while not unique, is sufficiently rare to be of interest. Sacculi, such as were found in this case, often are overlooked, especially where cystoscopy is not performed, and explain in some cases the failure to obtain perfectly satisfactory results, so far as vesical symptoms are concerned, after prostatectomy.



Cystoscopic Picture of Overgrowth

Within the sacculi may always be found infected urine, often with calculous material and, not infrequently, one or more calculi of considerable size. Vesical infection, with coincidental bladder irritation, continues under such conditions after removal of the prostate. In some instances, the condition can be remedied coincidentally with the radical operation by excision of the sacculi

CASE

The patient, aged 70, a farmer, gave a history of vesical irritation with frequent urination for the past ten years. An attack of complete retention occurred three years ago. This was relieved by catheterization. A few weeks later, another attack of retention occurred, the catheter having been relied upon ever since. The patient's general condition was really excellent for his age. The kidneys apparently were functioning normally. Rectal examination disclosed a large, characteristic prostatic overgrowth. This was soft, and had none of the earmarks of malignancy. The cystoscopic picture is well shown in the accompanying drawing.

Prostatectomy was proposed and assented to, the suprapubic operation for obvious reasons being selected. The conditions found corresponded with the diagnostic findings. Within the two large sacculi shown in the illustration, was, as might have been expected, a considerable quantity of residual urine. In the one upon the right side was a calculus about the size of a hazel-nut. In the sacculus upon the left side of the bladder, there was a quantity of sabulous matter with no definite calculus-formation. The sacculi were evacuated, and drained with small rubber tubing of small caliber, which was brought up through the suprapubic wound and attached to a medium sized rubber vesical drain. As to whether the tubing used to drain the sacculi remained *in situ* for any length of time is, of course, problematic. In view of recent developments in the surgical management of such sacculi, the author in a similar case probably would excise them.

The prostatectomy proved exceedingly simple and the post-operative report of the case was uneventful. For several months after the operation, the urine was fairly clear, but the conditions subsequently became worse, although the urine at no time was in as bad condition as before the operation. The patient meanwhile was so comfortable, comparatively speaking, that he was exceedingly satisfied with results. He died five years later of causes to the author unknown.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
H. J. ROWE, M. D. - - - Casselton, N. D.
H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

AUGUST 1, 1918

TRENCH SANITATION

There are, undoubtedly, a large number of men suffering from trench disorders,—trench fever and trench joint disorders,—and, in spite of everything that has been done by the medical men and the army, a number of cases of trench disorders will remain, but perhaps not increase.

Dr. C. E. Burt, in the *Boston Medical and Surgical Journal* of April 25, claims that trench feet can be prevented to a large extent by the following precautions:

1. Boots and shoes should be at least one size too large, so that two pairs of socks may be worn.
2. Rubber hip-boots should be furnished if there is standing water in the trenches.
3. A rule difficult to apply, is to keep the body dry and warm by wearing weather-proof clothing, especially when it rains.
4. Every twenty-four hours the boots should be removed, the feet rubbed and dried, and dry socks put on. This would also seem a difficult matter to carry out, particularly when men are in the trenches for days and sometimes weeks at a time without changing clothing.
5. Whale-oil or antifrost-bite grease should be thoroughly rubbed into the feet and legs.
6. If rubber boots are not worn the boots should be well oiled or greased.
7. Drainage of the trench or dry standing places should be provided. Avoid standing still as much as possible.

8. Keep the legs elevated while resting, and avoid a stooping posture while sitting.

9. Avoid fatigue by keeping up the physical condition of the soldiers by proper nourishment and warmth. Frequent use of hot soups and rum fills the bill. (This method is wisely administered by the Red Cross workers, Salvation Army workers, and those who have to do with the feeding of the soldiers). Of course, there are many objections to the use of rum, but so far the armies have found it necessary to give a limited amount of alcoholic stimulant to the men who have suffered from such serious exposure.

10. Puttees should be loosely applied.

These conclusions by Dr. Burt seem to be extremely wise, but only time and experience will tell how many of his suggestions can be followed out.

Trench fever is evidently due to the transmission of a specific germ by the louse from one infected person to another; and, in order to avoid this, if the rules of Dr. Burt are followed out, the extermination of the vermin is one of the most important measures to be used in the present warfare. Sterilization of the clothing of the wearer is probably the only reliable way in which the louse can be destroyed, and this again in a very difficult matter in that there are so many cases in which sterilization cannot be applied at all times.

SITUATION AT THE WESTERN FRONT

The following is a letter written by a young physician who was sent to France. He was then transferred to England, where he underwent military training and, later, was sent with the British Expeditionary Forces to the front in France.

Having known the doctor, the editor feels sure that the brief account of his experiences will be interesting to other medical men. His statement is a very frank one, dealing with some of the common experiences that come to all medical men; but in particular it illustrates the further need of doctors abroad.

This man is the only medical man attached to a brigade, and consequently he is on call day and night. But he has the stuff in him, and is responding nobly to the work assigned to him. His experience, probably, is similar to the experiences of many others, but he develops a humorous vein by which he turns his exciting moments, and shows how reasonably safe one is even so near the firing line.

June 9, 1918.

Lately I have been having several very interesting ex-

periences. One night recently, when I was sleeping very soundly, I was awakened by the sound of feet rapidly hurrying through a long corridor in the direction of a dugout. Shrapnel was pounding the dickens out of our tin roof. I put on my shoes in a big hurry, and then—damn it all—I couldn't get my trousers on over them. Believe me, I was mad. I just kicked a hole in them, and put my feet through. I hurried Dr. ——— up, and we rushed for the dugout, only to find it too crowded. Then I lost ———, but found another dugout nearby. Guns were cracking and bullets whistling, and shrapnel pouring down. Up in the air an enemy plane was dodging a series of search lights. I was in the dugout over an hour before the signal "All's clear" was given. Then I went back to bed and slept soundly again, although two bombs were dropped very near me.

After leaving this town, I rode in a baggage car to another station, and found that the commanding officer to whom I was to report was several miles out. I took my luggage out in the road, and stopped every truck until I persuaded one to give me a lift. After having tea with the commanding officer I was sent several miles to the front to join a unit which was in reserve. I was assured that it was easy to get on to the ropes of my work while in reserve. Well, when I got there the unit was leaving for action in half an hour. You know how much I like guns of any sort, and I had the good luck to draw a noisy unit, and I had to go under fire the first night, among complete strangers. I kicked on riding a horse into action, so I had the disgrace of riding in a wagon. It was arranged that I should reach headquarters at midnight. I did try to ride a quiet horse for a few minutes along with another lieutenant. I sure made a good imitation of Ichabod Crane.

When the horse trotted my gas-mask would flop on one side of me, and my tin helmet slid over my eyes so I couldn't see at all. I did not ride long. Then I climbed on the wagon again. I got so near to the enemy that the only thing between us was a piece of burlap and a few miles of space. We continued to proceed, and it continued to get darker. Far away the cracks of the cannon could be heard and, as it got darker, their flashes could be seen.

On and on we rode until the flash was at the side of us, and then back of us. The wind produced by the explosion would blow my helmet over my eyes. Still we rode on. By this time I was getting pretty nervous, and I got the foot-board and the back of the seat joggling around. I expected to fall off the wagon any time.

Finally, when I thought we must almost be in Berlin, we were told to get our gas-masks ready. Shells were now flying over our heads from both directions, and I was learning to tell which were British and which German. Then Fritz sent over a heavy shell fire of gas, and we had to wear our masks. When my windows were cleared I could only see the smallest part of the world, and when they were foggy I could see nothing at all. I did not see how the driver managed his horses, and was not surprised when there was an explosion close by and they got away from him for a few minutes. I really never expected to live to write about this. Finally the horses stopped, and the driver got back in his seat. Gas shells were still bursting, and shrapnel flying. At last we accomplished our errand, and started back, but the firing was so heavy and the

distance so great that we were ordered to spend the night just outside the active region. When we went to sleep the gas still hung around us, so I sat up and breathed through my respirator for another half hour, and then it seemed safe to remove it. I slept an hour and a half in jerks, sitting up in the box of a wagon with the horse licking my helmet, and a mule pushing a harness all over me. Anyway, I'm here today, and just waiting to move West.

LANDLORDS IN WAR TIME

It is in no boastful spirit that we say that medical men make greater financial sacrifices than any other class of men when they enter upon war service. With comparatively few exceptions the physicians who enter the service are over thirty years of age, and most of them have been in practice long enough to have become fairly well established, and have an earning capacity of several thousand dollars a year; but with this income they have a necessary annual expense account almost as great, to say nothing of a large capital, composed of time and money spent in the seven or more years of educational work required to prepare one to practice medicine.

The large sacrifice comes in giving up a practice that has been established at the expense of much time and money, and great sacrifices in other directions—giving up a practice with its bright prospects which can with difficulty, if at all, be built up again after one or more years of absence from one's field.

Many physicians who are called to the service of our common country have office leases, which, if not sold or cancelled, impose a grievous burden upon them.

Here arises a question between tenant and landlord upon which our opinion is frequently asked, and we are also asked as to the course in this matter pursued by the landlords in the Twin Cities. We are glad to be able to say that most of the landlords known to us have been exceedingly generous in dealing with the knotty question. To some tenants they say, "Do your errand of patriotism and mercy; your lease is cancelled." To some they say, "Your office will be held for you without rent, however long you are gone in the service of our country." In some cases, a part of the rental is remitted, and the compromise is mutually satisfactory. But in some cases a Shylock says, "I want my pound of flesh." Without a single exception, the man who says this is the owner of a large building bringing returns far in excess of the interest capital may justly earn. He is *the* landlord, the one seen in a child's imagination.

The two small children of a Minneapolis man were riding their broom-sticks, when they fell into a boastful mood as to their greatness.

The elder said: "I am the greatest man in the world; I am the Lord."

The younger for a moment was nonplussed, but her wit came to her, and she replied:

"I am the greatest man in the world; I am the landlord."

If the exigencies of a world war demand too great sacrifices from medical men, the same exigencies surely demand that others share in their sacrifice; and the problem before us must be solved by landlord and tenant. If the pound of flesh is demanded—especially from a lean man—public opinion will say that the bond calls for no blood.

Like the mills of the Gods, public opinion sometimes grinds slow.

MISCELLANY

THE VOLUNTEER MEDICAL SERVICE CORPS

Dr. Franklin Martin, member of the Advisory Commission of the Council of National Defense and chairman of the Council's General Medical Board, authorizes the following:

Questions likely to arise in the minds of doctors seeking membership in the Volunteer Medical Service Corps are answered in a questionnaire, which is being sent in quantity to the executive committees of the corps in the several States. These executive committees are now being appointed.

The central governing board of the corps, which is a committee of the General Medical Board of the Council of National Defense, makes it plain that the information in the questionnaire is not complete, as cases relating to eligibility are constantly arising. As previously announced, this corps is for the doctors not eligible to enrollment in the Medical Reserve Corps because of physical disability, age (over 55), essential public or institutional need, or dependents.

The insignia for the corps has been designed and passed upon by the Council of National Defense, and the buttons will shortly be ready for distribution. The design is an openwork shield with the medical caduceus and wings, surmounted by the letters V. M. S. C.

The executive committees in each State will be furnished lists of the applicants for membership. The questions and answers are as follows:

INFORMATION ON THE VOLUNTEER MEDICAL SERVICE CORPS

1. *How should I apply for membership?*

Write to the Medical Section, Council of National Defense, and application blanks and circulars of information will be sent. When received, fill out the application form in full, being guided by instructions contained in the rules of organization and the circulars of information.

2. *What shall I do with application form when completed?*

Forward to the Medical Section, Council of National Defense, Washington, D. C.

3. *What is to be gained by the creation of this organization?*

A classification as to the availability of all physicians not eligible for military service.

4. *What is meant by classification?*

Our record of information furnished by the physician himself, so that if the future demands each one could be used to the best advantage.

5. *What is meant by availability for service?*

Information of record, so, as to determine where, when and how physicians can be requested to render service.

6. *Who are eligible?*

All physicians who would be accepted by the Medical Reserve Corps were it not for physical disability, age (over 55), essential public need (boards of health and the medical care of isolated communities), essential institutional need (medical schools and hospitals), or dependents. Women physicians are eligible.

7. *How will eligibility to this corps be determined?*

Information obtained from application blanks, three personal references, and the executive committee of your State will be considered by the central governing board, which shall determine final action.

8. *How do I become a member of this corps?*

By vote of the central governing board.

9. *How will physical disability be determined?*

If you have applied for a commission in the Medical Reserve Corps and are rejected because of physical disability, that information will be of record. If a physical disability is obvious, a statement by the executive committee to that effect is all that is necessary; otherwise apply for commission in the Medical Reserve Corps, and if rejected physically that rejection will be of record in this office.

10. *Does membership in the corps carry with it rank and pay?*

This corps is not authorized to give rank. Arrangements shall be made between a member and the agency requesting service. The question of compensation and place of service, whether with or without rank, must be determined at that time.

11. *Can any member of this corps be ordered to active duty?*

No member will be ordered to render any service. Requests to accept service according to qualifications and availability will be made, such service to interfere as little as possible with already existing duties.

12. *What will be the probable character of this service?*

Question 22 of the application blank is as follows:

Are you available for any of the following services:

a. Consultant (medical service, surgical service, public-health service, special service—what?)

b. Institutional (laboratory, administrative, medical service, surgical service, special service—what?)

c. Local or medical advisory boards.

d. Reclamation of registrants rejected for physical unfitness.

e. Services to needy families and dependents of enlisted men.

f. Sanitation.

g. Miscellaneous service.

13. *Can I be admitted to the Medical Reserve Corps if I become eligible after election in the Volunteer Medical Service Corps?*

Yes; but notify the central governing board that you have accepted a commission in the Medical Reserve Corps.

14. *How is essential public or institutional need determined?*

By the central governing board, which will be guided by information obtained from application blanks, personal references, executive committee of the State, Surgeon General's Office, and officials of colleges, hospitals, boards of health, and community.

15. *How is eligibility of physicians because of dependents determined?*

By the central governing board, being guided by information secured.

16. *Do I receive insignia to show membership in this corps?*

A small badge has been authorized by the Council of National Defense. This will be issued to each member of the corps.

NEWS ITEMS

Dr. J. G. Havens has moved from Cloquet to Owatonna.

Dr. D. J. Paradine has moved from Floodwood to Cloquet.

Dr. N. T. Owen has moved from Nemo, S. D., to Lead, S. D.

Dr. W. F. Keller has resigned as health officer of Sioux Falls, S. D.

Dr. W. M. Housman, of Dell Rapids, S. D., was seriously injured in an automobile accident on July 8.

Dr. C. A. Fjelstad, of Austin, is taking a special course in x-ray work at the University of Minnesota.

A quarterly meeting of the Red River Valley Medical Society was held at Thief River Falls on July 11.

Lieut. C. E. Blankenhorn, of Malta, Mont., has been ordered home from France for service in an Eastern camp.

The County and City Hospital of St. Paul treated 8,800 patients in 1917 at a cost of \$10.64 per week each.

The Minnesota quota of 450 nurses to be especially trained for army and navy service, has been raised, with 60 to spare.

The City Hospital of Minneapolis faces a very large deficit at the end of the year because of the increased cost of maintenance.

Capt. A. S. Hamilton, of Minneapolis, who joined the M. R. C. some months ago, was called to Washington last week for active service.

The American Marine Corps had lost 1,106 men in action up to June 7, and by sickness just 1. Was ever such a disease record made?

Dr. C. C. Thauwald has moved from Gibbon to Le Sueur to take up the work left by Drs. Le Clerc and McDougald, who are in the service.

The patriotic session on the evening of August 29 at the meeting of the Minnesota State Medical Association, will be made a striking feature of the annual meeting.

Dr. H. A. Britton, assistant superintendent of the Minneapolis City Hospital, is slated for the superintendency to be vacant September 1 because of the resignation of Dr. Collins.

Dr. A. G. Chadbourn, of Heron Lake, has bought the Southern Minnesota Hospital from Dr. A. J. Moe, of that city, who has been at the head of the institution for many years.

The infantile paralysis serum, recently discovered by Dr. Rosenow, of the Mayo Clinic, is furnished free to the physicians of North Dakota through the laboratories of the State University.

Dr. H. E. Rawlings, on the staff of the More Hospital, Eveleth, has resumed his work after confinement in St. Joseph's Hospital of St. Paul for three weeks, following an operation for appendicitis.

Dr. J. P. Hiebert, of Minneapolis, has been instructing a class of women in first-aid work in the LaSalle Building. This instruction is free, and is an admirable preparation for service at home or abroad.

The University of South Dakota has conferred the degree of LL.D. upon Dr. L. C. Mead, of Yankton, S. D. This is a fitting recognition of Dr. Mead's long services at the head of the State Hospital for Insane.

Only five cases of infantile paralysis and four of cerebrospinal meningitis were reported in Minnesota during the past three months. The number of cases of contagious diseases in the state is unusually small.

Dr. George F. Butler has resigned as Medical Director of Mudlavia, and accepted a position as Medical Director of the North Shore Health Resort at Winnetka, Ill. He will begin his active duties there on September 1st.

The full program of the Minnesota State Medical Association meeting, to be held in Duluth on August 28-30, will be ready for distribution about August 15. The provisional program appears on another page of this issue.

Dr. E. R. Barton, of Frazee, was given a farewell reception last week upon his departure for Fort Riley, Kans. A handsome wrist watch was

presented to the doctor. Upon his return Dr. Barton will locate in Minneapolis.

The Swift County Red Cross Chapter has arranged with the Benson Hospital for free care in maternity cases of the wives of the soldiers and sailors of the county. The physicians of Benson will give their services free.

Capt. B. P. Rosenberry, of Winona, who was commissioned first lieutenant just a year ago, has now been made major. He spent three months in special training in Camp Benjamin Harrison, O. He is now probably in France.

The loss of teachers in medical schools has so crippled these institutions that the War Department of the Government is seriously considering the plan of commissioning all teachers, and holding at their work all who are needed on the faculties.

Dr. E. W. Gaag, who formerly practiced at Breckenridge, and then went to Great Falls, Mont., has now located in Wheaton. He has recently taken post-graduate work in Chicago and the East, and will specialize in ear, nose and throat work.

Dr. Alex A. Pesonen, of Duluth, died last week at the age of 38. Dr. Pesonen was a graduate of Michigan. He practiced in Virginia (Minn.) a number of years, and moved to Duluth a year ago. He was associated with Dr. E. L. Lindgren of Duluth.

Capt. F. P. Moersch, now stationed at the Base Hospital at Camp Upton, N. Y., while home on a vacation last week, was married to Miss Agnes Dreis, of Minneapolis. Dr. Moersch has been associated with Dr. W. A. Jones, of Minneapolis, for several years.

A new call has been made by the Government for women to train for service as nurses. The call is for 25,000 women from 19 to 35 years of age to accept assignments to either a civilian training-school or the army nursing-school, to prepare for work at home or abroad.

The Sioux Valley Eye and Ear Academy omitted its semi-annual meeting scheduled for July 25 at Omaha because of the absence in the army of many physicians and also because the American Academy of Ophthalmology and Otolaryngology is to meet August 5 in Denver.

The Minnesota State Board of Health, the State Advisory Commission, and the Public Health Association have buried the hatchet, and will hereafter work in harmony. A committee composed of the three presidents will attempt to avoid all friction in the work of the three bodies.

Dr. P. M. Hall, of Minneapolis, who was ap-

pointed temporary superintendent of the Minnesota Sanatorium for Consumptives when Dr. Beach resigned, has now accepted the superintendency, and will move to Walker on August 1. Dr. Hall has practiced in Minneapolis thirty-six years.

Fifteen medical men will be required for the three new regiments to be organized in the Minnesota National Guard. The apportionments will be made by Dr. P. J. Plondke, of St. Paul, the head of the medical department of the Guard. Physicians eligible to the M. R. C. will not be appointed.

Major C. E. Hunt, of Grand Forks, N. D., who has been honorably discharged from the M. R. C. because of physical disability, has become associated with Drs. Witherstine, Wilson & Engstad. He will assist Dr. Engstad during the absence of Drs. Witherstine and Wilson, now in the M. R. C.

Dr. H. O. Collins has resigned the superintendency of the Minneapolis City Hospital, after nine years of service. He gave as the reason for his resignation lack of harmony between himself and the Board of Charities and Correction. Dr. Collins goes to the Winnipeg City Hospital at a considerable increase of salary.

The Wabasha County Medical Society celebrated the semicentennial anniversary of its foundation on July 11. An historical sketch of the society was read, and papers were presented by Dr. J. H. Simons, of Minneapolis; Dr. M. J. Shaughnessy, of Wabasha; Dr. G. Schmidt, of Lake City; and Dr. D. S. Fleischhauer, of Wabasha.

Dr. Herman O. Fjelde, of Rolla, N. D., died on July 14 at the age of 53. Dr. Fjelde was a graduate of the University of Minnesota, class of '95, and had practiced in Abercrombie, N. D., and in Minneapolis, before going to Rolla. He was noted for his historical knowledge, and he did much to give the Americans a better knowledge of Norway, and the Norwegians a fuller knowledge of America.

Dr. John M. Robinson, with the authority of the St. Louis County Medical Society, is soliciting money and surgical instruments to be sent to Belgium and French physicians to help re-establish them after the war. The need is very urgent. Donations will go through Dr. W. W. Keen, 1729 Chestnut Ave., Philadelphia. Every physician in Minnesota should send a little money and one or more instruments, the latter to be in good condition.

Every doctor in the country is to be enrolled

in either the Medical Reserve Corps or the Volunteer Medical Service Corps, or, one may add, the slackers' corps. In carrying out this enrollment the country has been divided into five groups of states. Group No. 5 includes Iowa, Minnesota, North Dakota, South Dakota, Montana, Wyoming, and Nebraska. The physicians of each state will be classified for military and civil purposes.

Dr. E. J. Huenekens, of Minneapolis, who is in the charge of the new Division of Child Conservation of the Minnesota State Board of Health, will organize clinics throughout the state under the auspices of local physicians. The admirable work done in an independent clinic at Little Falls suggested the formation of the new division by the State Board of Health. Physicians may very properly volunteer to co-operate with Dr. Huenekens.

The annual meeting of the Montana State Medical Association was held at Butte on July 10 and 11, with a large attendance. The entertainment of the members by the Butte people was exceedingly cordial. Physicians who have no dependents and have not volunteered in M. R. C. were scored by Dr. McCarthy of Butte, and his remarks were heartily cheered. The following officers were elected for the current year: President, Dr. E. W. Spottswood, Missoula; vice-president, Dr. C. C. Wallin, Lewiston; secretary-treasurer, Dr. E. G. Balsam, Billings.

The second annual convention of the South Dakota State Nurses Association was held at Rapid City last month. The state was divided into three districts, and each district will have an association as a component society of the State Association, which is affiliated with the American Nurses' Association. The following officers were elected: President, Mrs. Elizabeth Dryborough, Rapid City; first vice-president, Miss Clara Sullivan, Aberdeen; second vice-president, Miss H. M. Noff, Watertown; recording secretary, Miss Blanch Townsend, Dell Rapids; corresponding secretary, Miss Nellie Card, Hot Springs; treasurer, Miss Elva Wade, Rapid City.

RECENT NEW ASSIGNMENTS OF NORTH-WESTERN MEDICAL OFFICERS

Minnesota—

To Camp Dodge, Iowa: Capt. W. H. Eaton, Duluth; Capt. W. W. Lewis, St. Paul; Lieut. W. C. Piper, Sanborn.

To Camp Grant, Ill.: Capt. C. R. Ball, St. Paul.

To Camp Wadsworth, S. C.: Lieut. S. O. Black, Rochester.

To Camp Wheeler, Ga.: Lieut. E. W. Gilray, Minneapolis.

To Camp Zachary Taylor, Ky.: Lieut. H. C. McIntosh, St. Paul.

To Fort Oglethorpe, Ga.: Capt. J. F. Lynn, Waseca; Lieut. C. W. Woodruff, Chatfield; Lieut. Rolf Hovde, Duluth; Lieut. F. W. Franchere, Lake Crystal; Lieut. J. M. Hall, Minneapolis.

To New Haven, Conn.: Capt. J. N. Elliott, Minneapolis.

To Washington, D. C. (Surgeon-General's Office): Major L. G. Rowntree, Minneapolis.

Montana—

To Camp Lewis, Wash.: Capt. E. L. Sutherland, Sheridan; Lieut. Drura Claiborn, Big Timber; Lieut. C. E. Beltzer, Warhoe; Lieut. A. S. Needles, Scobey.

To Camp Grant, Ill.: Capt. F. M. Poindexter, Dillon.

To Fort Riley, Kas.: Lieut. G. A. Windsor, Livingston.

North Dakota—

To Camp Grant, Ill.: Capt. M. P. Rindlaub, Fargo; Capt. R. D. Campbell, Grand Forks; Lieut. W. H. Witherstone, Grand Forks.

To Fort Oglethorpe, Ga.: Lieut. Leroy Sante, Ellendale; Lieut. W. L. Cowper, Michigan.

To Fort Riley, Kas.: Capt. O. W. McClusky, Carrington; Lieut. C. A. Swanson, Jamestown.

Lieut. E. C. Strucke, Garrison, honorably discharged.

SOUTH DAKOTA OFFICERS

To Camp Dodge, Iowa: Lieut. Carlyle Hare, Bellefourche; Capt. G. G. Cottam, Sioux Falls.

To Camp Lewis, Wash.: Lieut. Dewey Sutton, Redfield.

To Fort Riley, Kas.: Lieut. J. S. Tschetter, Huron.

To Fort Oglethorpe, Ga.: Lieut. L. L. Parke, Canton; Lieut. F. H. Stewart, Kimball; Lieut. F. D. Gillis, Mitchell; Lieut. Olaf Haraldson, Watertown.

Transfers

MINNESOTA OFFICERS

Lieut. H. L. Goss, Minneapolis, from Camp Pike, Ark., to Camp Custer, Mich.

Lieut. John Stevens, Gonvick, from Fort Riley, Kas., to Camp Dodge, Iowa.

Lieut. H. E. Douglas, Hutchinson, from Fort Riley, Kas., to Camp Dodge, Iowa.

Capt. A. L. Cludas, Minneapolis, from Fort Sill, Okla., to Camp Dodge, Iowa.

Lieut. W. E. Grenpler, Minneapolis, from Camp Sheridan, Ala., to Camp Grant, Ill.

Lieut. F. P. Moersch, Minneapolis, from Camp Upton, N. Y., to Camp Pike, Ark.

Lieut. R. R. Simmons, Rochester, from Camp A. A. Humphreys to Army Medical School.

Lieut. F. N. Bjerken, Red Wing, to Camp Dix, N. J.

Lieut. E. V. E. Mastin, Rochester, from New York City, to Camp Grant, Ill.

Lieut. G. L. Johnson, Newfolden, from Fort Riley, Kas., to Camp Wheeler, Ga.

Lieut. C. H. Cherry, Chisholm, from Camp Pike, Ark., to Camp Wadsworth, S. C.

Lieut. D. H. Pitts, Minneapolis, from Army Medical School to Camp Zachary Taylor, Ky.

Lieut. R. C. Lowe, Fairmont, from Mineola, N. Y., to Fairfield, O.

Lieut. H. I. Twiss, St. Paul, from Fort Riley, Kas., to Fort Sill, Okla.

Lieut. A. W. Swedenburg, Gully, from Fort Riley, Kas., to Jefferson Barracks, Mo.

Lieut. H. B. Weinburg, Waterville, from Fort Riley, Kas., to Newport News, Va.

Lieut. Pio Blanco, Rochester, from Boston to N. Y. City (Hospital for Ruptured and Crippled Children).

Major W. H. Darling, Minneapolis, from Camp Shelby, to the Philippine Department.

Lieut. W. E. Camp, Minneapolis, from Camp Dodge, Iowa, to Washington, D. C.

MONTANA OFFICERS

Lieut. A. A. Husser, Bingham, from Boston, Mass., to Camp Cody, N. M.

Lieut. J. W. Olson, Troy, from Boston, Mass., to Camp Grant, Ill.

NORTH DAKOTA OFFICERS

Lieut. J. F. Hanna, Fargo, from Boston, Mass., to Camp Beauregard, La.

Lieut. J. W. Newlove, Minot, from Fort Riley, Kas., to Camp Bowie, Texas.

Lieut. J. A. Johnson, Grand Forks, from Fort Riley, Kas., to Camp Lewis, Wash.

Lieut. L. G. Eastman, Hazen, from Fort Oglethorpe, Ga., to Camp Wadsworth, S. C.

SOUTH DAKOTA OFFICERS

Capt. J. W. Brackett, Sturgis, from Fort Riley, Kas., to Camp Lewis, Wash.

Lieut. O. S. Fasser, Belle Fourche, from Boston, Mass., to Camp Travis, Texas.

Lieut. J. C. Rogers, White Lake, from Fort Riley, Kas., to Camp Zachary Taylor, Ky.

Commissions Accepted

BY MINNESOTA PHYSICIANS

Dr. R. T. Adams, Mantorville; Dr. E. R. Barton, Frazee; Dr. G. W. Beach, State Sanatorium; Dr. B. S. Bohling, Sandstone; Dr. W. H. Carson, St. Paul; Dr. F. W. Davis, Alden; Dr. J. F. X. Gendron, Grand Rapids; Dr. D. V. Gleysteen, Lambert; Dr. H. J. Hartig, Minneapolis; Dr. S. S. Hesselgrave, St. Paul; Dr. R. J. Hubert, St. Paul; Dr. W. J. Kremer, Minneapolis; Dr. G. F. Lemke, St. Paul; Dr. J. F. Lynn, Waseca; Dr. G. L. Merkel, St. Paul; Dr. F. J. Schatz, Rosemount; Dr. R. O. Urban, Minneapolis; Dr. O. H. Wilcox, Minneapolis.

BY MONTANA PHYSICIANS

Dr. F. J. Adams, Great Falls; Dr. A. G. Fuller, Missoula; Dr. L. P. Gaertner, Three Forks; Dr. A. E. Henderlite, Camas; Dr. Rudolph Horsky, Helena; Dr. H. H. Judd, Bozeman; Dr. D. S. Mackenzie, Havre; Dr. F. M. Poindexter, Dillon; Dr. T. B. Scott, Butte; Dr. G. A. Windsor, Livingston.

BY NORTH DAKOTA PHYSICIANS

Dr. A. F. Bratrud, Grand Forks; Dr. M. R. Irby, Lankin; Dr. W. C. Wilson, Grand Forks.

BY SOUTH DAKOTA PHYSICIANS

Dr. J. F. Adams, Aberdeen; Dr. W. A. Delaney, Mitchell; Dr. D. F. O'Connor, Elkton; Dr. E. M. Stansbury, Vermilion; Dr. M. L. Stiffler, Yankton.

In addition to the official lists of assignments, transfers, and acceptances of commissions in the M. R. C., the following items of semi-official or unofficial information have reached our office since the date of our last issue:

Dr. C. E. Fawcett, of Stewartville, has been commissioned captain, and assigned to Fort Riley.

Dr. H. A. Kistler, of Minneapolis, has been commissioned lieutenant in the Navy Reserve Corps, and been assigned to duty with the Navy recruiting office in Minneapolis.

Dr. F. H. Rollins, of St. Charles, has been commissioned captain.

Dr. J. A. Gates, of Kenyon, has been commissioned captain.

Dr. G. A. Dwinin, of Bottineau, N. D., has been commissioned lieutenant.

Lieut. D. W. Carig, of Sioux Falls, S. D., has been ordered to Fort Riley, Kans.

Dr. M. J. Kern, of St. Cloud, has been commissioned captain.

Dr. R. G. Stevens, of Aberdeen, S. D., has been ordered to Camp Dodge, Iowa.

Dr. W. G. Chambers, of Blue Earth, has been commissioned captain.

Dr. A. Gullixson, of Bricelyn, has been commissioned lieutenant.

Dr. W. I. Firey, of Roundup, Mont., has been commissioned lieutenant, and ordered to San Francisco.

Dr. T. W. Walsh, of Roundup, Mont., has been commissioned captain.

Dr. M. M. Hursh, of Grand Rapids, has been commissioned captain.

Dr. T. B. Marquis, of Livingston, Mont., has been commissioned captain.

Dr. W. F. Keller, of Sioux Falls, S. D., has been commissioned captain, and ordered to Fort Oglethorpe, Ga.

Dr. C. J. McGuire, of Altura, has been commissioned captain, and ordered to Camp Dodge, Iowa.

Dr. M. M. Ghent, of St. Paul, has been commissioned captain.

Dr. Th. O. E. Moeller, of Devils Lake, N. D., has been commissioned captain.

Dr. W. J. Meytum, Alexandria, S. D., has been commissioned captain.

Dr. N. L. Linneman, Duluth, has been commissioned captain.

Dr. S. W. Anderson, Atwater, has been commissioned lieutenant.

Dr. W. H. Daniels, Crookston, has been commissioned lieutenant.

Dr. T. J. Devereaux, Aberdeen, S. D., has been commissioned lieutenant.

Dr. A. W. Drew, Swanville, has been commissioned lieutenant.

Dr. V. R. Hodges, Terry, S. D., has been commissioned lieutenant.

Dr. S. M. Johnson, Buhl, has been commissioned lieutenant.

Dr. C. A. McConnel, Minot, N. D., has been commissioned lieutenant.

PROVISIONAL PROGRAM OF THE MINNESOTA STATE MEDICAL ASSOCIATION

Annual Meeting August 29 and 30, 1918

Duluth, Minnesota

SECTION ON MEDICINE

Dr. Henry L. Ulrich, Chairman, Minneapolis.

Dr. T. R. Martin, Secretary, Duluth.

1. The Problem of Humidity Indoors,

Dr. E. P. Lyon, Dean of Medical School

University of Minnesota, Minneapolis.

2. The Principles of Foreign Protein Therapy,
Dr. W. P. Larson, Professor of Bacteriology,
University of Minnesota, Minneapolis.
3. Effects of Under-feeding and Re-feeding upon
Growth,
Dr. C. M. Jackson, Professor of Anatomy,
University of Minnesota, Minneapolis.
4. Toxic Dermatitis,
Dr. E. L. Brown, Professor of Pharmacology,
University of Minnesota, Minneapolis.
5. A Medical Service with the British Expeditionary
Forces in France,
Dr. E. T. F. Richards, Assistant Professor of
Medicine, University of Minnesota, St. Paul.
6. Hemolytic Icterus,
Dr. John P. Schneider, Assistant Professor of
Medicine, University of Minnesota, Minneapolis.
7. The Therapeutic Effects of Over-feeding in Perni-
cious Anemia,
Dr. T. A. Peppard, Instructor in Medicine,
University of Minnesota, Minneapolis.
8. Poliomyelitis,
Dr. E. C. Rosenow, Mayo Clinic, Rochester.
9. The Thyroid and Metabolism,
Dr. H. S. Plummer, Mayo Clinic, Rochester.
10. The Blood-Picture in Exophthalmic Goiter,
Dr. W. A. Plummer, Mayo Clinic, Rochester.
11. The Nervous Symptoms in Pernicious Anemia,
Dr. H. W. Woltmann, Mayo Clinic, Rochester.
12. Poliomyelitis in Minnesota,
Dr. W. P. Greene, State Board of Health,
Minneapolis.
13. Neurocirculatory Asthenia (Irritable Heart): A
Study of 35,000 Draft Recruits,
Dr. E. L. Tuohy, Duluth.
14. Rickets,
Dr. C. A. Scherer, Duluth.
15. Pellagra,
Dr. N. L. Linnemann, Duluth.
16. Acidosis,
Dr. S. H. Boyer, Duluth.
17. The Diagnosis of Early Tuberculosis,
Dr. Geo. Douglas Head, Minneapolis.
18. Problems Arising in Local Draft Boards,
Dr. John W. Bell, Minneapolis.

SOCIAL MEDICINE FOR THE COMBINED SECTIONS

19. The Second Line of Defense,
Dr. Arthur J. Todd, Professor of Sociology,
University of Minnesota.
20. Papers on Public Health; Aspects of Venereal Dis-
eases:
 - (a) Program of Control of Venereal Diseases
by Boards of Health,
Dr. Harry Irvine, Director of the Bureau of
Diseases, State Board of Health.
 - (b) What It May Accomplish,
Dr. Mabel S. Ulrich, Director of Education,
Bureau of Venereal Diseases, State Board
of Health, Minneapolis.

SECTION ON SURGERY

1. Prostatic Stone,
Dr. Archibald MacLaren, Chairman, St. Paul.
Dr. A. W. Ide, Secretary, Brainerd.
Dr. E. S. Judd, Rochester.
2. Transverse Incisions in the Upper Abdomen,
Dr. R. E. Farr, Minneapolis.
3. Fractures,

- Dr. L. E. Daugherty, St. Paul.
4. The Causes of Disability Resulting from Indus-
trial Accidents to the Lower Extremity,
Dr. J. R. Kuth, Duluth.
5. Subject not announced.
Dr. A. Schwyzer, St. Paul.
6. Hernia with Undescended Testicle; Report of Five
Cases,
Dr. W. J. Cochrane, Lake City.
7. Subject not announced.
Dr. C. B. Lewis, St. Cloud.
8. Subject not announced.
Dr. A. C. Strachauer, Minneapolis.
9. Subject not announced.
Dr. W. J. Mayo, Rochester.
10. Subject not announced.
Dr. Wm. R. Bagley, Duluth.
11. Surgical Results in the Removal of Spinal-Cord
Tumors,
Dr. A. W. Adson, Rochester.
12. Subject not announced.
Dr. A. N. Collins, Duluth.
13. The Value of Enterostomy in Acute Peritonitis,
Dr. H. C. Cooney, Princeton.
14. The Medical Man in War,
Colonel Henry S. Greenleaf, Ft. Snelling.
15. On Gall-Bladder Work,
Dr. J. S. Holbrook, Mankato.
16. Subject not announced.
Dr. J. C. Masson, Rochester.
17. Subject not announced.
Dr. H. P. Ritchie, St. Paul.
18. Subject not announced.
Dr. E. S. Muir, Winona.
19. Subject not announced.
Dr. J. A. Thabes, Brainerd.

The Committee of Arrangements announce that there will be a patriotic meeting on the evening of August 29 to be addressed by speakers of national prominence.

OFFICE ATTENDANT WANTED

Nurse preferred, one who is qualified to give anes-
thetics, and do ordinary laboratory work, also x-ray
work. In answering give experience and salary ex-
pected. Address, Dr. C. I. Oliver, Graceville, Minn.

LOCATION OFFERED

OFFICE FOR RENT AND EQUIPMENT FOR
SALE

Suite of four rooms. X-ray machine, etc. Will go
into army. Practice of about \$6,000 per year. Town
of 20,000. Address 142, care of this office.

ASSISTANT WANTED

A Scandinavian physician (draft exempt) as as-
sistant in a large surgical and general practice; good
income, with permanency for one qualified. Must be
good mixer and worker. State full particulars; begin
in four weeks. Address 141, care of this office.

PARTNERSHIP WANTED

A physician of ability and excellent standing in his
community, with eight years of large general practice,
desires association with a busy physician and surgeon.
Age 33; perfect health; married; draft exempt. Am
willing to take special course as occasion requires. Very
best references. Have preference for internal medi-
cine and for the Middle West. Address 139, care of
this office.

For Circumcision

we offer a special catgut suture not only particularly suitable for the purpose, but one that is exceptionally convenient and safe.



Sizes 00 and 0, Three Tubes in a Box. Price, 25 cents per tube.
No samples.

OBTAINABLE FROM YOUR DEALER

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

"Sick Headache"

—and other headaches—

are usually relieved more or less promptly as you remove their cause. In the meantime—

K-Y ANALGESIC

locally "rubbed in," will usually afford comfort without blistering or soiling.

Gives Nature's Corrective Forces a Chance

*No fat or grease. Samples and literature on request.
Water-soluble. Collapsible tubes, druggists, 50c.*



Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Chafing, Sunburn, Prickly Heat

—and similar afflictions—
are promptly relieved by

K-Y Lubricating Jelly.

Applied liberally to irritated or inflamed areas, the pronounced cooling and soothing action of this effective local remedy is at once manifest.



Water-soluble; non-greasy; "smells nice".

Collapsible tubes at Druggists.

Samples and literature to physicians only.

K-Y Lubricating Jelly

"Stops the itch
without greasing the linen."

Paraffin Treatment of Burns

is successfully applied
by the use of

REDINTOL

Made from carefully selected ingredients of the highest quality, and combined in proportions to insure the most satisfactory results, Redintol makes possible the ready application of the newest and most effective method of treating burns, even of the most severe degree.

Redintol is a plastic and elastic dressing which forms an occlusive, non-adhering covering to the injured area. It can be applied with practically no pain and affords immediate relief from burning and smarting.

Redintol promotes rapid healing, with minimum scarring and lessened contractions of the skin or tendons.

Redintol is supplied in individual packets, ready for immediate application.

Sample and Full Directions on Request.

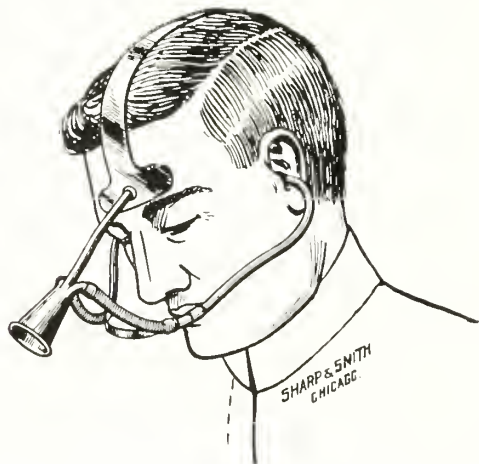
Johnson & Johnson

New Brunswick, N. J.

U. S. A.

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

65 East Lake St. - - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY
AND PROMPTNESS ARE OUR
CHIEF AIMS. Send to our nearest
laboratory for fee list and containers
with instructions for collecting all
specimens. These containers will be
sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aenaerobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

**Wassermann Test, Blood or
Spinal Fluid \$5.00**

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

PUBLISHER'S DEPARTMENT

A HIGH-GRADE INDUSTRIAL STOCK

The Northern States Power Co. of Minneapolis, affiliated with the Minneapolis General Electric Co., offers their stock for sale on a monthly payment basis, with the privilege of "cashing in" if one cannot keep up his payments.

No safer stock is for sale on the market, and the dividends are certain to be liberal, if not large. See their announcement on another page.

THE STANDARD MEDICAL SUPPLY CO. OPENS A ST. PAUL OFFICE

The Twin Cities have been so thoroughly one city in business matters that all large business houses in one maintains offices in the other. The Standard Medical Supply Co., of Minneapolis, has just opened an office at 207 Lowry Annex, St. Paul, and will carry a complete sample line of surgical and hospital supplies.

All physicians, in or out of the Twin Cities, are invited to call at the company office in either city.

LAVORIS

Lavoris is a stable zinc preparation that has won its way into the practice of physicians and dentists without any improper claims or extravagant advertising. It has a soothing, curative effect upon the mucous membrane as a mouth-wash and for internal medication.

The manufacturers, the Lavoris Chemical Company, of Minneapolis, are worthy the greatest confidence, and the physician who sends for a sample bottle and uses in his own mouth, with a full knowledge of what it contains, will not hesitate to prescribe it as a remedy entirely familiar to him, but not in so pleasing a form.

ARSPHENAMINE—METZ

Under the above name the H. A. Metz Laboratories, Inc., of New York, are manufacturing "Salvarsan," and doing so in America and under a license granted by the Federal Trade Commission. While they also retain the name "Salvarsan," the scientific name, with "Metz" added, is a guarantee that the product is made by the Metz Laboratories, under the same processes and according to the same standards as those set by the discoverer of Salvarsan, Prof. Paul Ehrlich.

This information must be gratifying and helpful to all medical men who prescribe Salvarsan.

THE ST. JAMES HOSPITAL AND SANITARIUM

The aboved-named institution is fortunate in having an attractive and commodious building (formerly the St. James Hotel, the pride of that city), located in one of Minnesota's best and most attractive small cities, St. James.

When a hospital and sanitarium comes into possession of such a plant at a nominal cost it reduces that bugbear called "overhead" to a point that makes for low cost of operation and low rates without cutting the service correspondingly.

This institution has long been successfully conducted, and has the reputation of being one of the best in the smaller cities of the state, and one in which all modern conveniences and excellent care are at the disposal of every patient.

THE MERCHANTS COLLECTION AGENCY

The above Agency, which has built up a large business among Minneapolis merchants, gives the same attention to the accounts of physicians, doing such work with tact, yet with sufficient aggressiveness to obtain results. Such a company gets the money due a physician without giving offence to the man from whom the collection is made, and thus often saves the physician a good patient whose temporary financial condition may have put him in a bad light.

For information, write The Merchants' Collection Agency, 1015-1019 New York Life Building, Minneapolis.

QUAKER OATS

One of the last benefits to accrue to the public from food-regulation is a knowledge of food values, and this applies to practically every known food. Food value means something beside the cost of food: it means what a food gives to the system in heat units, in muscle-building, in brain power, etc.

The cereal values have been greatly misunderstood by the public, especially the values of the cereals as they come to our tables. At the head of all the cereals is oats, and, fortunately, the price of oats is the lowest of all when measured by true values. Moreover, this cereal has not been injured by any milling process, but improved by selection and by a cleansing mill process. The Quaker Oats, in these two respects, stand above all other brands; and the family that will cook oatmeal long enough and will make oatbread properly will make a discovery in good eating; and it will be a long time before a day passes in that family without oats upon the table in some form.

Under the score rating by experts oats outrank white flour nearly two to one, and white bread even more than two to one. It is worth while to read the true and informing statements made by the Quaker Oats Company in our columns from time to time.

A GREAT PATRIOTIC CELEBRATION

Fifteen thousand employes of Armour & Co., more than 75 per cent of them of foreign birth, got a close up of "the Big Boss," at the Flag Day exercises, June 14, at the Chicago plant. They liked the personal touch, and "the Boss" liked it.

When J. Ogden Armour appeared on the speaker's platform with Maclay Hoyne, the principal speaker of the day, and A. Watson Armour, F. Edson White, R. J. Dunham, and G. B. Robbins, vice-presidents of the company, he was acclaimed in more than thirty tongues. Every foreign tongue spoken in the United States can be heard in a tour of the Armour plant, and the "Viva, Vive, Evviva, Atzye, Niech Zyje, Zivio, Eljen, Da, Zdravstvuet and Banzai," were given as lustily as were the typical "Ray's" of the Americans.

The real feeling of the crowd was expressed in the muttered comment of one member of the great throng when he spoke aloud to himself, "Gad, this is true Democracy."

It is the occasional personal touch that counts in great organizations and events of this kind where the "boys" are given a chance to come into more or less intimate contact with "the big boss," always are reflected for days afterward in increased efforts on the part of the employes.

Preceding the principal program, which included the raising of the flag, a parade was formed which marched

through the stock yards and through the streets between the plant buildings.

In the parade were a band, a squadron of police, the Armour Volunteer Training Corps, the Armour Red Cross Unit, the Armour Girls' Marching Corps, and the Armour Boy Scouts.

The Flag Raising Program was held in front of the Armour Wholesale Market and after the singing of the Star Spangled Banner, in which Mr. Armour led, the flag was raised while a bugler played "the salute to the colors." Then Mr. Hoyne was introduced and after a few words he gave way to Mr. Armour. When the chief of the great industry arose the stock yards rocked with the cheers of the thousands. So affected was Mr. Armour that he could not speak, and after a "Thank you, thank you, this is great," he called for a cheer for the flag. It was given and given as a cheer never before has been given in the stock yards. Then the crowd sang America.

During the program the crowd spoke in unison an "American's Creed," which follows:

"I believe in the United States of America as a government of the people, by the people, for the people; whose broad powers are derived from the consent of the governed; a democracy in a republic, a sovereign nation of many sovereign states; a perfect union, one and inseparable, established upon these principles of freedom, equality, justice, and humanity for which American patriots sacrificed their lives and fortunes. I, therefore, believe it is my duty to my country to love it; to support its constitution; to obey its laws; to respect its flag; and to defend it against all enemies."

THE SWEDISH HOSPITAL OF MINNEAPOLIS

Every modern city hospital has a distinctive personality and an atmosphere—if the two things are not the same—of its own; and just what this is depends upon its building and environments, its aim as manifest in its board of trustees, its staff, and its superintendent, and especially upon the team-work of its entire personnel.

Tested by these elements, few hospitals dealing with the public has a more attractive personality than the Swedish Hospital of Minneapolis. It is dominated by a board of trustees composed of high-class citizens of Minneapolis who have accepted membership on the board with a keen sense of the obligation such membership imposes; it has a high-grade staff of physicians and surgeons, and its superintendent is Mr. G. W. Olson, whose success as a hospital superintendent is recognized by medical men throughout the Northwest, and especially by hospital superintendents.

These elements determine the personality of the Swedish Hospital, which is that of the successful business man who puts upon geniality and service their true values.

Outside physicians who send patients now and then to the hospitals of Minneapolis and St. Paul, should become thoroughly acquainted with the Swedish Hospital.

A TIMELY AND IMPORTANT DECLARATION TO THE MEDICAL PROFESSION

Founded in New York City in 1867, the House of Schering & Glatz has been, from its very inception and throughout its existence, an *American* concern, entirely free and independent of foreign control, financial or otherwise.

The relation of Schering & Glatz to the German-

owned *Chemische Fabrik auf Actien* (vorm. E. Schering) has always been that of an *outright buyer* of that Company's products with the sole privilege of marketing them in the United States.

The German concern has never had a dollar's worth of investment in Schering & Glatz, nor have Schering & Glatz ever owned stock in the German concern, either as a firm or as individuals.

The "Schering" in Schering & Glatz stands for the name of one of the founders, Mr. Hugo Schering, a distant relative of the Berlin family. He and the original partner, Mr. Glatz, both American citizens, have been dead for many years.

Schering & Glatz' leading chemical and pharmaceutical products, so long identified by the brand name of "S. & G." are now manufactured in the U. S. A., either by themselves or under their direct supervision and control. Other products, as yet unavailable, will be added as fast as prevailing conditions permit.

Schering & Glatz, Inc., guarantee for all of these products a standard of quality fully the equal of the formerly imported.

In prescribing "S. & G." products, the physician will henceforth have the double satisfaction of applying therapeutic agents which he has known and relied upon for many years, while feeling assured that he is using the *American-made* products of a *wholly American* concern.

AIDS IN DIAGNOSIS

The Chicago Laboratory was a pioneer in bringing to the medical profession of the country the "aids in diagnosis" that a professional laboratory alone can furnish.

It requires a pretty large hospital or "clinic" to maintain the equipment and to pay the skilled specialists found in such an institution as the Chicago Laboratory, which today is placed by our present mail and express facilities within a very small number of hours of every bedside. This time limit, except in case of examinations required at the time of an operation, is so short that the public laboratory can do all this kind of work a physician needs, and can do it so much better than he himself or his assistant can do it. The public laboratory is now essential in the work of every physician; and it is indispensable for the more difficult tests and interpretations.

The Chicago Laboratory (25 E. Washington St., Chicago) has an able staff, and its work will always be found helpful and satisfactory.

HEPCO FLOUR

For Diabetics

Product of the famed *soya bean*—rich in proteins and fats, but has less than 1% starch. Makes tissue-building breads that are delicious.

Approved by Council on Pharmacy and Chemistry of A. M. A. Send for booklet, "Diets for Diabetics."

Shall we send free sample to test?

Waukesha Health Products Co.
61 Grand Ave.,
Waukesha, Wis.



THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, AUGUST 15, 1918

No. 16

TRANSACTIONS OF THE NORTH DAKOTA STATE MEDICAL ASSOCIATION, THIRTY-FIRST ANNUAL MEETING, 1918

OFFICERS AND COMMITTEES.

PRESIDENT

E. A. PRAY, M. D. Valley City

FIRST VICE-PRESIDENT

W. P. BALDWIN, M. D. Casselton

SECOND VICE-PRESIDENT

FRED EWING, M. D. Kenmare

THIRD VICE-PRESIDENT

H. E. FRENCH, M. D. University

SECRETARY

H. J. ROWE, M. D. Casselton

TREASURER

WILLIAM F. SIHLER, M. D. Devils Lake

COUNCILOR—CASS COUNTY SOCIETY

PAUL SORKNESS, M. D. Fargo

COUNCILOR—DEVILS LAKE DISTRICT SOCIETY

W. D. JONES, M. D. Devils Lake

COUNCILOR—GRAND FORKS DISTRICT SOCIETY

J. E. COUNTRYMAN, M. D. Grafton

COUNCILOR—NORTHWESTERN DISTRICT AND KOTANA SOCIETIES

E. M. RANSOM, M. D. Minot

COUNCILOR—SHEYENNE VALLEY DISTRICT SOCIETY

F. L. WICKS, M. D. Valley City

COUNCILOR—SIXTH DISTRICT SOCIETY

F. R. SMYTH, M. D. Bismarck

COUNCILOR—STUTSMAN COUNTY SOCIETY

LE ROY G. SMITH, M. D. Jamestown

COUNCILOR—SOUTHERN DISTRICT AND RICH- LAND COUNTY SOCIETIES

L. B. GREENE, M. D. Edgeley

COUNCILOR—TRI-COUNTY SOCIETY

CHARLES MacLACHLAN, M. D. New Rockford

COUNCILOR—TRAILL-STEELE COUNTY SOCIETY

JAMES GRASSICK, M. D. Grand Forks

MEMBER OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION

CHARLES MacLACHLAN, M. D. New Rockford

Alternate

F. W. MacMANUS, M. D. Williston

Proceedings of the House of Delegates

FIRST SESSION—TUESDAY, JUNE 18TH

The House of Delegates met at 8 p. m. on June 18, 1918, in Madson's Hall, Fargo. There were present, in addition to the President and Secretary, Councilors Paul Sorkness, F. R. Smyth, James Grassick, Charles MacLachlan; Delegates H. B. Huntley, C. J. McGurren, R. W. Pence, A. A. Whittemore, J. W. Bowen, W. C. Aylen, O. J. Fortun, and T. Mulligan.

The minutes of the last meeting were approved as printed, and their reading was dispensed with. The president of the Councilors, Dr. F. R. Smyth, made his report in which he said that loyalty was the prevailing sentiment among the profession, and that the medical profession was doing its share to win the war.

The Secretary submitted his annual report as follows:

SECRETARY'S REPORT

The war is on, and our professional ranks have been decimated very materially; and there is an urgent call for still more men to fill up the gap in the Medical Reserve Corps. The voluntary enlistments have been quite numerous, and albeit more than a hundred physicians have gone into service from this state, yet, so far as learned, no community is suffering for want of professional attention.

There is a noteworthy peculiarity about enlistments which is worthy of comment. The country districts are furnishing the greater proportion of the physicians, whilst the men in the cities are rather slow in assuming their relative places in the ranks.

Then, too, another rather queer proceeding is prominent, and that is when a physician from the city goes

into service, a country practitioner moves out of his rural abode and takes his position in the city.

The fact of the matter is that when the questionnaire was sent out to every doctor in the state, it was to obtain facts for the Government upon which to base the relative number of physicians that could be spared without materially robbing the various communities of their just proportion of professional aid and to see that communities were not deprived of medical attention.

SECRETARIES' CONFERENCE

The conference of state secretaries assembled at Chicago was called for the purpose of deciding, if possible, the best means of securing the five thousand physicians needed for the Army, and the two thousand required for the Navy. There was a wide divergence of opinion as to the best method to pursue, some believing that conscription would have to be resorted to so that men who ought to go would be obliged to assume the pressure of service. The conservative idea prevailed that the loyalty of the physicians in general would be an incentive to induce young men, physically qualified, to voluntarily offer their services in defense of their country, the older men in their absence to assume the practice and distribute themselves in such a way that all communities would be supplied with medical care.

So far, North Dakota has "gone over the top" by voluntary enlistments, and each week brings to me additional names from the Surgeon-General's office of those who have applied and have been recommended to be commissioned.

MEMBERSHIP

By a singular coincidence more members are reported this year as belonging to component societies than in any preceding year; and as a consequence the State Association has the largest enrollment in its history, namely, 401 members, as compared with 1916, when we had 358, and in 1917, 385.

These figures are gratifying, but they are somewhat misleading because some societies have reported all their men in the service of their country as members, but have not paid the state dues; whilst other societies have paid for the absent members.

ANNUAL REPORTS

All the component societies have made their annual reports, the last report being received June 14th, lacking a day of being four months beyond the stipulated time for reports, which is February 15th.

These late reports greatly delay my work, inasmuch as it is impossible for me to get out an official roster until all reports are received, and in consequence not a few members are deprived of the official journal, because their names are not reported promptly by the local secretaries when members pay their dues.

Promptness should be the requisite for any secretary who is elected, and he ought to assume the responsibility or give way to another who will attend to the duties of the office.

THE COUNCIL ON MEDICAL EDUCATION

The Council on Medical Education is continuing its survey for the purpose of determining what hospitals in the United States are qualified to furnish satisfactory internships. Seven medical schools and seven state licensing boards have adopted the requirement of a

fifth, or intern, year for graduation or licensure, and the certainty that other schools and state boards will follow their example necessitates a more complete survey of the hospitals than has thus far been conducted. In making such survey it is desirable and important that in each state there be a strong advisory committee, made up of doctors who are thoroughly acquainted with the hospital situation, and who are vitally interested in the problem of the relation of hospitals to medical education, and who will act in an advisory capacity with the Council in its investigation of the hospitals. A permanent committee should be appointed for this purpose. Drs. F. E. French of the University and G. M. Williamson have been active and are worthy of consideration.

SOCIAL HYGIENE

The Government, through the Council of National Defense, is carrying out a program for the reduction of the most serious public-health menace to military and national efficiency, which is the venereal diseases in the Army.

During the twelve weeks ending December, 1917, there were reported from thirty-one cantonments 21,742 new cases of venereal disease. The incapacitation of these men not only involves loss of time, but, in addition, it has cost the Government to keep them during the period of hospital confinement, which varies from one to eight weeks, more money than is required to maintain the entire command at Camp Dix, New Jersey, which has 20,859 men, plus an additional sum for medical treatment.

Inevitably, the disease will relapse in hundreds of cases and in many instances after the men have been transported to France and put into condition for service at the front, at a cost to the nation of probably \$1,500 for each man.

The important fact in this connection is that a large proportion of venereal-disease cases originate, not in the camp or in the communities surrounding the camp, but in the cities and towns from which the men come, and through which they pass on the way to camp. Reports from the Surgeon-General's office show this. The enormous cost to the Government on account of venereal diseases is due largely, therefore, to conditions in civil life.

There is urgent need for an organized attack simultaneously by all states on the problem of venereal disease. When but a few states deal with the problem spasmodically, the result is to drive the principal carriers (prostitutes) from one state to another. Mayors, city health officers, chiefs of police, police judges, city attorneys, superintendents of hospitals, and educators should now unite in an organized attack on these diseases. Eight states have undertaken vigorous campaigns against the venereal menace, and we ought to fall into line and take active measures to suppress this vice, for there are 3,000 registered men infected with syphilis in our state and there are five times as many men registered for military service who have gonorrhea. The Council of National Defense offered us a speaker, but the offer came too late to be of service at the annual meeting, the program being printed and the time taken up with other important subjects.

THE CONTROL OF CANCER

The American Society for the Control of Cancer again calls the attention of State Medical Associations

to the fact that they should take the lead in this phase of the campaign against malignant disease.

The American Society for the Control of Cancer renews its recommendation that each State Medical Association appoint a standing committee on cancer, and they believe that such committee should be continued in office for a term of at least three to five years. The chief function of such committee is the education of the physicians in the control of cancer by promoting addresses and symposia at state, district, and county society meetings, and arranging for the publication of the best obtainable papers in the journal of the Association, and distributing reprints and literature among practitioners, especially to non-members of societies.

THE JOURNAL-LANCET

The subscriptions to THE JOURNAL-LANCET have varied from 349 in January, 1917, to 392 in December, for which we have paid the publishers \$389.91.

All papers read at the annual meeting last year with one exception were printed. Frequent attempts to get the missing paper failed.

June 14, 1918.

Fraternally,
H. J. ROWE, M. D.,
Secretary.

The report was accepted and referred to the committee on Officers' Reports.

On motion, the President appointed a special committee on Social Hygiene, consisting of Drs. C. J. McGurran, F. R. Smyth, and O. J. Fortun.

The Treasurer read the following report:

TREASURER'S REPORT

RECEIPTS

Date	Society	Amount
May 12, 1917.	Cass County	\$15.00
May 12, 1917.	Sixth District	20.00
May 12, 1917.	Kotana Medical	5.00
May 12, 1917.	Southern District	5.00
January 21, 1918.	Sixth District	125.00
February 4, 1918.	Sixth District	45.00
February 4, 1918.	Kotana Medical	40.00
February 20, 1918.	Stutsman County	90.00
February 20, 1918.	Sixth District	30.00
February 21, 1918.	Devils Lake District	140.00
February 21, 1918.	Richland County	65.00
March 13, 1918.	Sixth District	20.00
March 13, 1918.	Traill-Steele County	45.00
March 13, 1918.	Devils Lake District	10.00
March 13, 1918.	Richland County	15.00
March 25, 1918.	Cass County	160.00
March 25, 1918.	Sixth District	10.00
March 27, 1918.	Sixth District	20.00
March 27, 1918.	Stark County	70.00
April 3, 1918.	Southern	65.00
April 3, 1918.	Sixth District	5.00
April 13, 1918.	Sheyenne Valley	120.00
April 16, 1918.	Northwestern	345.00
April 27, 1918.	Grand Forks District	310.00
April 27, 1918.	Sixth District	10.00
April 27, 1918.	Traill-Steele County	15.00
May 10, 1918.	Southwestern	60.00
May 10, 1918.	Sixth District	5.00
June 3, 1918.	Cass County	10.00

June 3, 1918.	Devils Lake District	5.00
June 3, 1918.	Sixth District	5.00
June 14, 1918.	Sheyenne Valley	5.00
June 14, 1918.	Cass County	5.00
June 15, 1918.	Tri-County	120.00

Total disbursements	\$1,987.99
August 20, 1917. H. J. Rowe, M. D.....	100.00
November 14, 1917. Bosard & Twiford.....	153.48
December 8, 1917. Bosard & Twiford.....	300.00
December 17, 1917. JOURNAL-LANCET	201.74
December 20, 1917. Pearl Snell Erickson.....	9.60
February 25, 1918. H. J. Rowe, M. D.....	140.00
March 12, 1918. Potter & Potter.....	12.50
June 15, 1918. H. J. Rowe, M. D.....	110.50
June 15, 1918. H. J. Rowe, M. W.....	110.50

DISBURSEMENTS

June 17, 1918.	H. J. Rowe, M. D.	12.00
June 14, 1917.	E. M. Watson	\$75.00
July 30, 1917.	Grand Forks Herald	8.00
July 7, 1917.	JOURNAL-LANCET	188.17
July 23, 1917.	Mabel Hoyda	77.00
July 7, 1917.	Savings Fund	500.00

Total receipts	\$2,015.00
	Dr. Cr.

May 12, 1917.	Balance on hand	\$1,803.69
Cash receipts for year, June 18, 1918.		2,015.00
Expenses for year		\$1,487.99
Deposited in Savings Fund		500.00
Balance on hand		1,830.70

Total	\$3,818.00	\$3,818.69
-------	------------	------------

SAVINGS FUND

May 12, 1917.	Balance in Bank	\$1,193.43
June 30, 1917.	Interest	23.87
July 7, 1917.	Deposit	500.00
January 1, 1918.	Interest	34.00
June 18, 1918.	Balance in Bank	\$1,751.30
July 1, 1918.	Accrued interest	35.03
Total		\$1,786.33
Total amount in bank		\$3,617.03

Respectfully submitted,

F. W. SIHLER, M. D.,
Treasurer.

On motion the reports from the several Councilor districts were read.

REPORTS OF COUNCILORS

TRAILL-STEELE COUNTY SOCIETY

GEORGE M. WILLIAMSON, M. D.,
President North Dakota Medical Association.
Dear Doctor:

In conformity with your request of May 16th, as Councilor of the Traill-Steele Medical Society, I beg to report as follows:

There are at present nine doctors located and practicing in Traill County and three in Steele County. Of those in Traill County eight are in good standing and one delinquent, with a good chance of re-instatement before our annual meeting. Of those in Steele County two are in good standing and one is not a member. The

latter is a new man in the County, formerly of New Rockford, and is a member there, but is not yet affiliated with the Traill-Steele Society. In addition to the above Dr. John G. Abbott of Hope, Steele County, and Dr. A. J. Heimark of Finley, Steele County, enlisted in the M. R. C. The former was discharged on physical grounds, and is now in California. He was in good standing till January 1, 1918, and is now out of our jurisdiction. The latter is still in the service, and his membership is kept up by the Society.

I would further beg to report that although the above is a very creditable showing for a small and scattered society, the results have not been attained through any special efforts of your Councilor. It is my opinion that the appointment of a carpet-bagger Councilor is far from being democratic, and militates against the progress and efficiency of the society over which he presides. I would respectfully suggest that this practice be discontinued, and, if necessary, that the constitution be amended with that end in view.

All of which is respectfully submitted.

Respectfully,

JAMES GRASSICK,
Councilor.

Grand Forks, May 31, 1918.

GRAND FORKS DISTRICT SOCIETY

To the House of Delegates, North Dakota State Medical Association.

As Councilor of the Grand Forks District Medical Society, I beg leave to report as follows:

The Grand Forks district includes the counties of Pembina, Cavalier, Walsh, Nelson, and Grand Forks, which are organized as one society. Meetings are held in Grand Forks, with the exception of the summer months, on the second Wednesday of each month. Dr. T. Mulligan, of Grand Forks, is President, and Dr. H. J. Friesen, Secretary. The meetings have been well attended, and many interesting papers presented.

Licensed regular physicians in the district.....	85
Licensed Homeopathic physicians.....	2
Non-licensed regular physicians.....	3
Total	91

MEMORANDUM

County	No. of Physicians	Members	Non-Members	En-listed
Pembina	11	11	0	1
Grand Forks, regular....	40	33	9	11
Grand Forks, Homeo....	2			
Cavalier	14	7	7	2
Nelson	8	3	5	1
Walsh	16	10	6	5
Totals	91	64	27	20

Of the above, two are members of adjacent societies. Of the non-members, three are non-licensed in North Dakota, and two are Homeopaths. Of those enlisted, seventeen are members and three non-members.

All of which is respectfully submitted.

THOS. MULLIGAN,
Councilor.

THE SIXTH DISTRICT SOCIETY

A crowd of Belgian boys was standing in front of a bare bill-board in Brussels, and staring eagerly at the

blank space. A German patrol came along, and the officer in charge demanded to know what the boys were doing. "Oh, Sir," they said, "we are just looking at the map of Germany after the war is over."

The Germans failed to see the joke, arrested the boys, and they were sentenced to long terms of imprisonment.

My report, as Councilor, also resembles the map of Germany after the war, and still, I hope, is as little of a joke as the German usurpers considered the boys' prophecy.

All my work for the past year has been based on "win-the-war" principles, and I have made no great effort to differentiate the methods or agencies with which I worked.

Usually I have written to the secretaries of the different local medical societies in my district, and asked for particulars of membership and activities during the war. This year I have devoted my time to activities which, I hope and believe, are of more importance to our country than the reports would be.

Although not done particularly as Councilor, I have devoted a great deal of time to work amongst the members of our profession in this district and in this work have made no distinction between members and non-members of our societies, except insofar that in writing to physicians I have urged the necessity of joining the local societies as a war measure. It is, of course, easier to reach an organized profession than individual members for such propaganda as we have had to engage in during the past year.

That our efforts have been of some value is shown by the facts that Lieut. V. H. Stickney, M. R. C., says that the Sixth District is the best organized in the state and that, as far as my knowledge goes, we have a larger percentage of physicians in actual service than any other district. In addition we have received 35 replies to questionnaires recently sent out, and of these 17 are willing to apply at once for commissions in the M. R. C.; 10 are willing to apply conditionally; and 8 say they will not apply or are doubtful.

That this patriotic work has not been detrimental to our medical organizations is shown by the increase in our membership in this district. Our secretary, Dr. L. A. Schipfer, is out of town and I cannot get the exact figures, but I feel justified in saying that the increase has been greater than in any similar period.

I intend to continue along the same lines as long as the war lasts, and am only sorry that I have not the time and energy that would enable me to do more for my country at this time.

F. R. SMYTH,
Councilor.

CASS COUNTY SOCIETY

DR. G. M. WILLIAMSON,
President of the North Dakota State Medical Association,
Grand Forks, N. D.

Dear Doctor:

As Councilor for Cass and Ransom Counties I wish to make the following brief report: The Cass County Medical Society, which comprises members from Cass and Ransom Counties, has held eight regular meetings during the year, which have been well attended, and a great deal of interest has been manifested at the meetings. The society has 36 active members, besides

eight soldier members whom the Society carries in good standing. There are still eight physicians in the district who are eligible to membership, but who have failed to become associated with the Society. Special efforts are now being made to get them in.

Respectfully submitted,

PAUL SORKNESS,
Councillor.

TRI-COUNTY SOCIETY

The work of the Tri-County Society, consisting of Eddy, Foster, and Wells Counties, for the year 1918 has taken on new phases during the year just past.

Many of our members have responded to the call of the war department for service in the Medical Department of the military service. Drs. Graham, MacKenzie, Goss, Swarthout, Robinson, and Derdiger are now located in several of the military hospitals throughout the country. A few more have undertaken special work to fit themselves for war service, and our secretary, unfortunately for the Society, is one of those who has been absent a good part of the time. Dr. E. M. Watson has removed to Hope, N. D., a town which had the service of two medical men for some years past, and had been left without a doctor at all.

I am glad to state those who are still within the district have almost uniformly been lending valuable aid to the Government at home by taking part as examiners for the Local Board of Exemptions in the several counties, by acting on the Medical Advisory Board of this district, and by giving generous support to the sale of Liberty Bonds, and in aiding, financially and morally, in the several campaigns for the American Red Cross. They are also assisting in the campaign for the conservation of food, and giving freely of their time in the support of all the agencies at work locally in the service of the Government war purposes.

New Rockford, N. D. CHARLES MACLACHLAN,
May 29, 1918. Councillor.

STUTSMAN COUNTY SOCIETY

DR. G. M. WILLIAMSON,
Grand Forks, N. D.

Dear Doctor:

The Stutsman County Medical Society has taken into membership four new members and one by transfer. One member has been transferred to another society, which leaves a membership of twenty.

G. GOLSETH,
Councillor.

Reports of committees were called for.

REPORT OF THE COMMITTEE ON TUBERCULOSIS

To House of Delegates of the North Dakota State Medical Association.

Gentlemen:

Your Committee on Tuberculosis begs to submit the following:

Tuberculosis still continues to be a menace to the health and efficiency of our people. Notwithstanding the money that has been expended for its suppression and the great amount of work that has been devoted to its control, it still continues to take as a toll more lives than all other contagious diseases. Although in the registration area it has decreased 30 per cent in the past fifteen years it still has a death-rate of 142 per 100,000 population. This would give for North Dakota about 1,000 deaths from the disease each year with at

least 5,000 active open cases. From the records of examining boards for the army we are led to infer that there are about twice that number.

We have at our Sanatorium accommodation for only 85 patients. Suppose they were changed on an average three times a year, it would only be about 250 a year that could be cared for in that way. This leaves 4,750 of the incipient and active cases, as well as many of the far-advanced infective and dangerous cases, that must be cared for in the homes of the people.

How to reach the masses and instruct them in the principles of right living so essential in the control of this malady, is a question that has received serious consideration. The North Dakota Anti-tuberculosis Association has continued its campaign of education by means of publications, literature, lectures, and demonstrations. It has through its field workers endeavored to reach a great number of people by taking advantage of public gatherings, and there presenting the subject matter in an attractive manner. During the past year it has preached the gospel of good health and right living at 5 district W. C. T. U. conventions, 38 school meetings, 14 child welfare meetings, 5 Farmers' Clubs, 6 State and County Fairs, 5 Educational meetings, state and county, 7 Federated Women's Club meetings, and 2 other conventions, making in all 82 large gatherings. In addition to this they interested over 7,000 school teachers of our state in giving a patriotic Good Health Program before Christmas, and in addition supplied 700 ministers with literature for use in Good-Health Week. It is hard to measure the concrete results of such a movement, but this we do know, that there have been as a direct outcome more applications for antituberculosis and good-health literature during the past five months than during the previous five years. Recognizing that the divided energies of our several public-health agencies have prevented intensive work by any one of them, a voluntary agreement was made between the State Board of Health, the State Public Health Laboratories, and the North Dakota Anti-tuberculosis Association to unite as the North Dakota Public-Health Service, the object being to place a competent public health nurse in the field to visit cities, examine school children, make sanitary surveys, hold mothers' meetings, interest communities in securing school nurses, and in other ways working up public sentiment in good-health matters with special emphasis on the prevention and control of tuberculosis.

Aside from the difficulty of securing properly qualified nurses to carry on the work the results have been so very encouraging that they have formulated the following State program for your consideration:

1. A State Department of Health, co-ordinating existing public-health agencies, with a full-time official as chief executive.
2. The employment of school and community nurses, and the physical examination of school children.
3. Adequate support for the control of tuberculosis and other communicable diseases.
4. An appropriation of at least five cents per capita for the expenses of the Department in conserving life waste.

The war has added a new problem,—how best to provide for and deal with the returned tuberculous soldier. It is a question of the greatest importance, and your Committee is of the opinion that this Association should devise ways and means by which these unfortunates

may be adequately cared for to the end that they may be individually restored to lives of usefulness, and that the public may be protected from infection. No better or more effective agency can be employed for the control of tuberculosis in its various manifestations than the skilled co-operation of an unselfish medical profession. This support we confidently bespeak.

All of which is respectfully submitted,

JAMES GRASSICK,
Chairman.

The report was accepted, and the committee commended for their fidelity.

The President appointed the following committees, namely:

Committee on Cancer: Drs. A. A. Whittemore, H. B. Huntley, and Jas. Grassick.

Committee on Officers' Reports: Drs. J. W. Bowen, Paul Sorkness, and Chas. MacLachlan.

Committee on Nomination of Officers: Drs. R. W. Pence, W. C. Aylen, and T. Mulligan.

REPORT OF THE COMMITTEE ON NECROLOGY

To the Officers and Members

House of Delegates of the North Dakota Medical Association:

It is becoming to pause for a moment in the midst of our scientific discussions, and pay a passing tribute to the memory of those of our fellows who, since our last meeting, have "Crossed the Divide."

Dr. Randall Thompson graduated from Chicago College of Medicine and Surgery in 1906, was licensed in Illinois, and practiced his profession in Chicago until October, 1917, when he moved west and located at Kildeer, N. D., where he died early in the year 1918, aged 43.

"Death is the quiet haven of us all."

Dr. Robert H. Devine, of Wahpeton, N. D., was born at Wheeling, West Virginia, October 11, 1863. After graduating from Bethany College he engaged for some time in railroad engineering work, and became analytical chemist for a large steel plant. Later he entered Jefferson Medical College, Philadelphia, and graduated from that institution in 1897. He chose Wahpeton, N. D., for the scene of his future activities, and there practiced his profession till the time of his death, May 4, 1918.

Dr. Devine was a typical representative of the modern, progressive, successful physician. He was thoroughly trained in up-to-date methods and familiar with the ripest conceptions of twentieth-century medicine. He carried into his work a vim and enthusiasm characteristic of the Western spirit, which he so freely imbibed. His end came in Breckenridge Hospital, an institution which he did so much to establish and where so much of his energy had been spent. It was a fitting finish to the day's work of one who had reached the zenith of his profession. "God's finger touched him, and he slept," amid the atmosphere of helpfulness in which he had so long, so lovingly, and so disinterestedly labored. Let us say with Swinburne—

"For Thee, oh, now a silent soul—my brother,
Take at my hands this garland, and farewell."

Dr. John Montgomery, of Ardock, N. D., was born in Durham County, Ontario, September 12, 1842. He attended Bowmanville High School and Toronto University, where he graduated in medicine in 1868. He began the practice of his profession at Cartwright, Ontario. In 1875 he visited Europe, and took up clinical studies in the hospitals of London and Edinburgh, receiving a diploma from the Royal College of Physicians. In 1879 he came to the Red River Valley, and opened an office for practice of medicine at Ardock, N. D. In 1889 he was chosen a member of the constitutional convention, and took an active part in framing the prohibition clause and in blocking the Louisiana Lottery clause.

He was a member of the first state legislature, and was returned for a second term. He was active in seeing the passage of the first state law regulating the practice of medicine. He was appointed State Superintendent of Health by Governor Allin in March, 1895. He was honored by his fellows and elected first president of the North Dakota Medical Society. He died at Fresno, California, June, 1917.

Dr. Montgomery was a splendid type of our pioneer physicians. Coming to the state in the full strength of robust manhood, he gave the best that was in him for the relief of suffering humanity. Having had the advantages of a liberal education secured in an atmosphere of high ideals and pure ethics, his influence in community, social, and professional life was felt to be for the best things. His genial disposition, kindly heart, and gentlemanly bearing were always in evidence, and made for him close and loyal friends. A sympathetic and skillful physician, a successful business man, an esteemed and honorable citizen, an affectionate husband and father—he leaves a glorious legacy to his State, his profession, and his family.

"His life was gentle, and the elements

So mixed in him that nature might stand up
And say to all the world, This was a man."

JAMES GRASSICK, Chairman.

The report was adopted, and the Secretary was instructed to send a copy to relatives of each deceased member, and to the local papers published in the vicinity where these men labored.

OFFICIAL PAPER

The question of continuing THE JOURNAL-LANCET as our official paper was taken up, and on motion it was laid over until we had a fuller representation of Delegates present. Adjourned.

SECOND SESSION—WEDNESDAY, JUNE 19TH

The House of Delegates convened at 12 M., and was called to order by the President, Dr. G. M. Williamson. There were present Drs. Sorkness, Smyth, Grassick, Golseth, MacLachlan, Huntley, McGurren, Trainor, Pence, Benson, Stackhouse, Whittemore, Bowen, Aylen, Fortun, and Mulligan.

REPORT OF THE COMMITTEE ON VENEREAL DISEASES

WHEREAS, reports from the U. S. Army show a large

number of the men in cantonments to be afflicted with venereal disease, and

WHEREAS, these reports prove conclusively that these men do not become infected so much in camps as they do either in their home communities or on way to camps, and

WHEREAS, a bill is now pending in the United States Congress providing for a bureau of venereal disease to be established in each state and under Federal control for a period of one year, beginning July 1, 1918, the same to operate in conjunction with the State Board of Health, and

WHEREAS, statistics show that venereal disease in the army is almost as much of a menace as bullets from the enemy and lessens its efficiency,

THEREFORE, BE IT RESOLVED, that this committee recommend to the State Medical Association and its Legislative Committee that their immediate attention be given the matter of drafting suitable laws governing venereal disease, the same to come before the next legislature.

C. J. MCGURREN,
O. J. FORTUN,
F. R. SMYTH,
Committee.

The report was adopted as read.

REPORT OF THE DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION

As two annual meetings of the American Medical Association have passed since our last annual session, that of 1917 four weeks later than our meeting at New Rockford last year and that of 1918 a week prior to this meeting, it might be well to make a comparative and brief allusion to the importance of each in the history of American medicine. To begin with the Association had not honored New York with its choice in about thirty years, and the city of magnificent altitudes outdid itself in the extension of courtesies to its medical guests.

A public reception at the Hippodrome presided over by Mayor John Purroy Mitchel was attended by over 10,000 medical men including their wives and guests. The profession was represented by many of our most gifted men in the army, navy and civilian life, as well as by distinguished practitioners and professors from allied countries overseas and from our own insular possessions.

Among those who from the platform paid homage to the profession were ex-President Roosevelt, ex-President Vincent, of the University of Minnesota, and Dudley Field Malone, Collector of the Post of New York.

There was at that time a striking contrast between the East and West in the conception of the seriousness of the undertaking we had recently entered upon, and this great difference was impressed strongly upon your representative as he tarried for a few hours on his way to New York, at Washington, at Baltimore and at Philadelphia.

The Allied flags were displayed not only on all public buildings but all along the miles of the many-storied business blocks of New York, and bodies of moving troops in khaki, and boy scouts headed by bands, playing the national airs of each of the Allied countries, were everywhere in evidence. We in the West had hardly yet awakened to the fact that we were at war,

while New York and other eastern cities were loudly proclaiming their patriotic fervor and their colleges and commercial plants were being emptied of young men volunteering for foreign service and eager to dare the dangers incident to transport through the submarine zones, and the more deadly menace of gas and shell fire.

The papers presented for discussion in the various sections largely centered upon subjects incident to active military service. The meetings were dominated by the spirit of war and already our National Government was giving recognition to the importance of thorough military medical organization and representation as one of the paramount requirements of the successful prosecution of the war.

Some 5,300 practitioners registered their attendance, and the Northwestern States were amply represented in numbers, considering the extreme distance and consequent expense of travel.

Time has turned the hands of the clock to the year 1918 and the meeting place Chicago in the week just passed.

In the period of time intervening, the war wave beating against the eastern coast has developed tidal wave proportions and has swept over the entire country from coast to coast, and even reached our far away possessions, overcoming every opposition.

Thousands of the very best equipped and most energetic members of the A. M. A. have voluntarily offered their services and accepted commissions in the many branches of the U. S. Military and Naval Services overseas and at home.

It is impossible for a delegate to more than very briefly sketch in a report like this, a few of the most important features of such a meeting.

The members of the House of Delegates registered and held their sessions at the A. M. A. Building, 535 North Dearborn St., while Hotel Sherman was the headquarters for the registration for all Fellows of the A. M. A. and where the scientific and commercial exhibits, the Information Bureau and Branch Post Office were located.

Just here allow me to interject that *it is necessary* and according to regulations for the secretary of each State Medical Association to furnish each delegate from his state with credentials setting forth the fact that he is the duly elected delegate of that state. It will save the delegate much embarrassment and the Committee on Credentials of the A. M. A. some unnecessary work and worry.

Your delegate had by letter a week earlier secured a room at Hotel Morrison, headquarters for the Section on Practice of Medicine, while the various other sections were distributed among half a dozen or more of the other leading hotels of the Windy City.

The report of Secretary Alex. R. Craig made at the opening session Monday, 10 a. m., gave the total fellowship of the A. M. A. May 1, 1917, as 44,020, while the total for the same date this year is 44,715, a net increase of 715 after deducting the total of the death record, the resignations, those dropped as ineligible and the remainder for non-payment of dues, 4,297 having been added to the fellowship roll during the year ending May 1st, 1918.

The secretary further reported the receipt of a

communication October 13, 1917, from the Provost Marshal General, acting for President Wilson, "requesting the active and vigorous co-operation of the A. M. A. in the establishment of Medical Advisory Boards covering the necessary conveniences required in communities where located and requesting that the House of Delegates formally and officially offer to the government the services and facilities of the A. M. A. for such assistance as may be in its power to render the government thereafter," and reported further the prompt acceptance on October 17th of the obligation imposed by the appointment of a committee of three with full power to act with the Provost Marshal General in these premises. The secretary further called attention to the fact that according to the By-Laws this is the year for re-apportioning the delegates of the various state associations and for which a committee of five members was later chosen.

The secretary further reported that the officers and members of the House of Delegates of the A. M. A. had memorialized Congress, requesting the repeal of the additional tax imposed upon members of the profession whose income from practice is in excess of \$6,000, as provided in Section 209 of the War Tax.

The Board of Trustees among various accomplished ends reported their active co-operation with the government in matters of war publicity work, by editorials in the Journal emphasizing the needs of the Army and Navy for Medical officers and calling upon the medical profession to be prepared to respond and in the sending out of nearly 200,000 application forms at different intervals to promote the adoption of voluntary medical service.

They further reported the purchase by the A. M. A. of \$17,000 in the First Liberty Loan, \$23,000 in the Second, and \$25,000 in the Third Liberty Loan, in all \$65,000.

They reported further the courteous and grateful acknowledgment of Surgeon General Gorgas for the splendid assistance rendered by the A. M. A.

The auditor's report of the Board of Trustees showed a surplus of over \$423,000 and a reserve fund of over \$166,000.

The Report of the Judicial Council consisted principally of an offer in detail for their consideration and sanction of an employee of a well known medical firm of Minnesota to place on the market for commercial disposition of a certain patent protected remedy discovered by him, 10 per cent of the receipts from which should accrue to him and the remainder to the University of Minnesota Foundation, which offer was made by resolution, was reported unfavorably upon by the Council and their report adopted by the House.

The report of the Council on Health and Public Instruction was replete with statistics showing the number and character of pamphlets distributed from May 1, 1917, to April 1, 1918, on Conservation of Vision, Sex Hygiene, Public Health, Care of Babies and kindred subjects.

All the members of this committee had been detailed on special government service at the various Base Hospitals and Military Camps, while the chairman had been sent to Russia as chairman of a special mission.

The Report of the Council on Medical Education dealt exhaustively with the progress made in the last four-

teen years, including in its report the importance of preliminary education, suggested reforms in medical education, the demand for better education, medical education for negroes, progress in medical licensure, and the organization of a National Board of Medical Examiners, giving the personnel of the board, which includes fifteen members and represents the highest type of medical requirement and national probity, among them being the Surgeons General of the Army, Navy and Public Health Service.

The report which is voluminous shows the headquarters of the Council have become, in fact, the clearing house of information in regard to medical education, medical licensure, medical cults and other matters pertaining to these subjects.

The report of the War Committee would appear to indicate that with the voluntary assistance offered it by various localized groups, the work seemed not to co-ordinate with the plans being pursued by the Surgeon General's department and shoals were encountered. However, a personal conference between the heads erased the misunderstanding and progress resulted. This refers particularly to the War Committees' willingness to assume a part of the responsibility in States Medical Section Council of National Defense, maintaining the identity of the work under the jurisdiction of the War Committee of the A. M. A. and referring particularly to the personnel of the Military Aides to the Governors.

The report also defines the limitations of the Honor Roll as published in the Journal recently.

Your delegate did not have much opportunity to attend the sections discussing any of the scientific subjects under consideration but was presented with reserve seat tickets for several meetings in the various theatres of Chicago, among the most important of these being the program of medical military activities at Medinah Temple, Wednesday evening. The reservation did not seem to hold good, however, for upon approaching the temple a few minutes before the opening, your delegate, together with an old classmate practicing in Chicago, to whom he was delighted to present the extra reservation offered, was astounded at the literal blocking of the square surrounding the building with thousands of people waving tickets and demanding entrance to an already overflowing building, where over ten thousand people occupied all the available space possible and entrance was of course denied. The program comprised the names of many notables from this country, including Surgeons General Gorgas and Braisted of the U. S. Army and Navy, respectively, and Sir James Mackenzie, that mighty exponent of the virtues of the country practitioner, and Sir Arbuthnot Lane, both of Great Britain. M. Justin Godart and Major Edouard Rist, France, Dr. René Sand, of Belgium, and many of our own distinguished men, including Major Alexander Lambert, M. R. C., U. S., who was elected President of the A. M. A. for the ensuing year at the meeting of the House of Delegates held the following afternoon, after he had entrained for New York to immediately sail for active service with General Pershing's forces in France.

Without doubt the most important and interesting of these special meetings on war subjects from the humanitarian standpoint was the one held at the Auditorium Theatre Thursday morning and afternoon, the

subject of the addresses rendered being "The Reclaiming, Re-education and Re-habilitation of War Cripples," and comprised a résumé of the work being done along these lines by auxiliary workers in France, Italy, Great Britain and Canada, with moving films illustrating the methods being employed, the entire propaganda outlining clearly the scope of work undertaken to make the crippled soldier take a useful place in the industrial and commercial world when lasting peace has been restored, and to save him from the shame of being looked upon as a dependent object of charity. The lecturers were men of international reputation in the splendid work to which they are devoting their energies; and their ideas were listened to with wrapt attention.

At the meeting Thursday afternoon, held in the Studebaker Theatre, for the discussion of questions bearing upon physical examinations and the physical requirements for service under the selective draft, I found Lieut. Victor Stickney, our efficient Aide to the Governor, at the aisle end of the row of seats allowed to North Dakota. Among members of this Association attending the meeting were registered: Drs. Arneberg and French, Grand Forks; Maercklein, of Oakes; Sand, of Fargo; Call, of Rugby; Clark, of Harvey, my traveling companion and friend; Donker, of Sykeston; Golseth, of Jamestown; Rasmussen, of Center; Rindlaub, of Fargo; Brown, of McClusky, whose cheerful visage appeared many times on the horizon; Cramond, of Rugby; Peake, of Grand Forks; Van de Erve, of Sherwood; Zimmerman, of Valley City; and last and certainly not least, our First Vice-President E. A. Pray, of Valley City, who claims he was putting up at the same hotel, but did not "lamp" until I met him on the Milwaukee sleeper out of Chicago coming home. Knowing him as I do, you are not surprised that I would have very little chance of encountering him in the line of duty, while the lights of the gilded city offered him rarer attractions.

Clark, of Harvey, and I left on Friday evening the 7th and spent Sunday with two of our Tri-County members, who have entered the service, Lieuts. Mackenzie and Goss, of Carrington, stationed respectively at Camp Dodge and Fort Des Moines, and both doing efficient soldierly service as reported by their superior officers.

The registered attendance showed over 5,500 present. Thanking you for the honor extended me at last year's meeting,

Respectfully,
CHARLES MACLAUGHLIN,
Delegate.

It was moved that a committee of three be appointed by the incoming President to report on the *Minnesota Medicine* and THE JOURNAL-LANCET at our next annual meeting, and that we continue THE JOURNAL-LANCET for the present, and until the committee makes its report in 1919.

THIRD SESSION—WEDNESDAY, JUNE 19TH

The House of Delegates convened at 5 P. M. and was called to order by President G. M. Williamson. There were present Drs. Smyth, Grassick, Golseth, Huntley, McGurran, Pence, Ben-

son, Stackhouse, Whittemore, Aylen, and Mulligan.

Reports of committees were called for.

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION

I had not expected to make a report, and so will say only a word or two in general. There is nothing particular in this state to report, but I was at the meeting called by the Council on Medical Education in February and I was also at the meeting called last Tuesday by the Surgeon-General at the time of the American Medical Association meeting in Chicago. Several things of interest came up at that time, and were discussed. One was the matter of continuous sessions for medical schools. This had been suggested last winter by Major Arnold, and, in fact, at that time it seemed that it was going to be urged by the office of the Surgeon-General for at least all of the larger schools and schools that could afford it—a continuous session with the idea of letting men finish up in three years instead of four. It was discussed very thoroughly last week, but the feeling of the medical men—I mean the teachers in the medical schools—was decidedly against it unless it were necessary. In the vote taken, the teachers put themselves on record against it, and the Surgeon-General is not urging it at this time.

Another matter of interest was that of keeping medical teachers in medical schools. Public-health work is suffering and many of the schools have lost a number of their most competent teachers. I think there is a plan to commission men who are teachers and assign them work so that they can feel they have a part in the Nation's task. A scheme of this kind was suggested with this addition, that men who are teachers be returned after a year or two of service—brought back to their positions to let the others who have stayed in the work go into service. This would be interesting. There are advantages, and, of course, we can see there would be some disadvantages.

Another point of discussion was the necessity of holding medical students in school. Young men are eager to enlist, and, of course, the draft itself would have drained the medical schools pretty completely a year ago if it had not been for the Medical Reserve Corps. I think it will probably be extended to include men who have done one year of pre-medical work. Coupled with the provision that the Government is putting out now in its plan for daily military instruction in practically all of the larger colleges, allowing men eighteen years of age to enlist in the service and receive military instruction while doing their college work and remaining in an inactive status, the Enlisted Medical Reserve Corps, will probably take care of this matter.

These are some of the questions that occupied the discussion. They were discussed for a whole day last Tuesday. I might say that Dean Vaughn rather strongly urged that all education be put on a military basis, that we "militarize all college education." I do not know as he went as far as to include high schools, but he held that all college education should be militarized, that the Government ought to take over all of the work of the laboratories and the instruction given and particularly in all of the sciences. (Applause.)

Respectfully,
H. E. FRENCH,
Chairman.

REPORT OF THE ASSOCIATION'S ATTORNEY FOR THE MEDICAL DEFENSE.

To North Dakota State Medical Association:

During the past year there have come into our hands as attorneys for the Association the following cases:

M. N. Semchenko vs. Dr. A. S. Nicholson, of Max (now Williston)

This was a suit for damages for negligence in reducing the fracture of plaintiff's leg, who claims that the bones lapped and caused a considerable shortening. The plaintiff went to Drs. Roan, Fisher & Co., and had the leg rebroken and set properly. Suit was started in October, 1917. We answered upon being advised that Dr. Nicholson was in good standing, but did not have sufficient time to get the history and make investigation. Subsequently we tried to have an investigation made, but Dr. Nicholson has been lax about getting a statement in, and Dr. Carr has taken the matter up with Dr. Fisher. Dr. Nicholson has now sent in a statement and the history of the case and treatment. He claims that when the plaintiff was discharged there was no shortening. It looks like a clear dispute of facts between the plaintiff and Dr. Fisher, on one side, and Dr. Nicholson on the other. Depositions of Dr. Fisher and others are to be taken in Bismarck on the 19th of June, 1918, after which time it will appear what their case really is. The case will come for trial probably the week of the 24th or the latter part of the week of the 17th.

George Monteith vs. Dr. A. J. Heimark, of Finley, N. D.

This case came into the office shortly before the date of trial, giving me only about ten days' time. I prepared as well as possible, and the case was tried before a jury, and they returned a verdict against the doctor for \$3,250. A copy of my report of November 10th to Dr. Rowe is attached hereto. If there had been time to properly investigate this case, I am satisfied the Association and its Committee would have advised that a settlement be made, and the case not defended. This is the first case for the Association in which a verdict has been returned against the doctor.

We still have pending the case of Philip Ott vs. Dr. Maereklein, of Dickinson. Hon. M. L. McBride, of Dickinson, has been looking after this to a large extent for the doctor, he having commenced the suit, to recover for fees, in which the defendant counter-claimed for malpractice. The case will probably never be tried.

The case of Clarence Young vs. Dr. W. B. Scott, of Ray, is also pending, and has not yet been set for trial, and I presume by this time the defendant, who, I believe, was a transient, has left the country. The case will probably die a natural death.

The case of Beardsley vs. Dr. John Ewing and Dr. Fred Ewing, of Kenmare, which was tried last year, and resulted in a verdict against the doctors, is now in the Supreme Court on appeal. This last case was defended by The Frankfort General Insurance Co. and the Medical Protective Association, of Indiana.

In the last-named case there are several questions of law, which, if decided as we contend they should be will establish the rule in these cases, as it has in other states, in favor of the doctors.

During the past year there have been no new decisions on any question of law of liability for malpractice or any change in the heretofore established rules as set

forth in our brief prepared and furnished to the Association.

Respectfully yours,

Minot, N. D.

BOSARD & TWIFORD,

June 15, 1918.

By R. H. BOSARD.

The President: You have heard the report of the attorneys for the Committee of Defense. What does it cost us per year?

The Secretary: \$300.

REPORT OF THE COMMITTEE ON OFFICERS' REPORTS

Our report is incomplete. We went over the report of the Secretary and the recommendations of the President. The committee fully agree with the recommendations of the Secretary, especially regarding the men who are leaving the ranks of the state and joining the colors. The principal thing in the Secretary's report was the matter of the men who are leaving, showing their loyalty to the country and their sacrifice in leaving their practice and having their places filled by men who come in from the country. The consequence is that the country is suffering much more than the cities today. We recommend that this be given publication to see if it will not have some influence on the men who are in the country. These changes are often dictated by selfish motives, and we recommend that a notice be put into the official journal to the effect that the State Medical Association urges medical men who remain in the country and have not volunteered for service to stay where they are most needed and not make any moves at the present time, especially for selfish motives.

As far as the rest of the Secretary's report is concerned, we concur in everything that he covers, and would recommend that this report be published as well as the President's address.

In regard to the President's recommendations, the Committee did not see fit to recommend anything further than had been recommended by the President himself, and, concurring fully in his recommendations, the Committee thought that the publication of the President's address would do just as much good as any recommendations that the Committee might make.

J. W. BOWEN,

PAUL SORKNESS,

CHARLES MACLACHLAN,

Committee.

On motion duly made and seconded the report of the committee was accepted.

The President: I thank the House of Delegates for receiving the recommendations I made in my address and adopting them in the manner you have. I thought possibly you or some of you might take issue on some of those things. I might say, as I said last year, I have given the matter a great deal of consideration, and the only object I had in mind was to try to do the Association as much good as possible. Since you have concurred with these recommendations I presume the incoming president will have some committees to appoint, and, if we can get right down to business and begin to do things, and act on these recommendations, we may get things

on a different basis in the future than they have been in the past.

REPORT OF THE AUDITING COMMITTEE

The Councilors, acting on the treasurer's report, made the following recommendation: Moved and seconded that the treasurer be authorized to appropriate \$200, or as much thereof as will be necessary, to defray the expenses of the State Committee of the National Defense; also to invest \$1,000 in Liberty Bonds in the name of the State Medical Association.

The Councilors have audited the treasurer's report as given to the House of Delegates on June 19, 1918, and find the same correct, and recommend the report be accepted.

F. R. SMYTH, Chairman,
J. W. BOWEN, Secretary.

Report of the Auditing Committee read and approved.

REPORT OF THE STATE COMMITTEE ON NATIONAL DEFENSE

Lieut. Stickney addressed the Delegates on the matter of the State Committee of the Medical Section of the Council of National Defense, and the expenses of the committee. It was organized in 1916 under another name, and consolidated with the committee doing Red Cross work, and has been doing work in connection with the induction of medical officers into the Medical Reserve Corps. A survey of the medical facilities and hospitals was made, their bed capacity, number of individuals on the hospital staffs, the equipment, number of sterilizers, and the amount of material in the hands of the Surgeon-General at Washington on the 1st of October, 1916.

Lieut. Stickney spoke of the expense and time necessary to do the work of the committee, and asked that some small part of the expenses be met by an appropriation from the physicians of the state. He went into detail as to the amount of correspondence that had to be conducted, and asked that some of this expense be taken care of.

Dr. Stackhouse asked what amount would be necessary. President Williamson announced that the Councilors would make recommendations on this subject. He asked what would be done in regard to the remission of the fees of the members of the Association who were at the front. The statement was made that this recommendation had been adopted with the other recommendations contained in the President's address.

Lieut. Stickney called attention to the recent work being done at Washington to make more cohesive the work of the local boards and medical advisory boards throughout the state. There

had been conflicts between the work of the boards and the work at the several camps. The matter has now been made uniform, and a new set of rules issued, known as Bulletin Form 75, entitled "Standards of Physical Examination Governing the Entrance to All Branches of the Armies of the United States." Those who have not a copy of the new rules can get one by applying to Lieut. Stickney at Bismarck. The old rules are to be destroyed; they are not to be filed away, they are to be destroyed and the new rules are to be used. Dr. Stickney asked that a few minutes be given him tomorrow before the general meeting so that he might inform all the members present in regard to this matter.

The State of North Dakota and the State of Wisconsin are the only two states in the Union that are ready to report and file their findings in the Surgeon-General's office at Washington. That report covers the men who have been inducted into the service and returned from mobilization camps for physical disabilities. Lieut. Stickney congratulated the members on the kind and quality of work they have been doing.

In anticipation of what the government would ask for, the Committee sent out questionnaires so as to make a complete registration of all the men who are practicing medicine in the state and classify them. Already returns had been received from somewhat over four hundred of these, and it was surprising to find how many men are on their toes to get into the service. The Government asked for fifty; the number could be easily doubled. A classification had to be made so that no community would be entirely depleted. North Dakota has one physician to about 1,300 to 1,400 population, while the average in the United States is one to 750. So it is a question, not of getting into the service, but of keeping some of our men at home, which in many cases is a hardship. Hospitals will have to be kept going. The hospitals at Bismarck and Dickinson, for instance, have a territory of one hundred miles or more, and good surgeons and good interns must be retained there to take care of the major surgery.

The President: The Councilors' report is in order.

REPORT OF THE COUNCIL

Dr. J. W. Bowen: The Council has met and elected Dr. Smyth chairman and myself secretary to report on the Treasurer's report. We find the same correct, and we recommend that his report be accepted.

It was also moved and carried that the Treasurer be authorized to appropriate \$200, or as much thereof as will be necessary, to defray the expenses of the state committee of National Defense, and also to invest \$1,000 in Liberty Bonds in the name of the North Dakota State Medical Association.

A member suggested that perhaps \$200 would be altogether too small an amount to appropriate for the uses of the State Committee on National Defense. Dr. Stickney said that \$200 would be a very small amount as compared to the expenses of the committee. The expenses are probably \$300 to \$400 for a meeting, but that is not to be taken into consideration. An amount is asked to buy stationery, supplies, and postage, and to cover some small incidental expenses that may arise. He asked how the money was to be paid, what procedure would be necessary. Dr. Smyth suggested that there should be an itemized statement presented to the Secretary of the Association, and that they be allowed to the extent of \$200. The motion was carried.

Upon motion Dr. T. O'Brien was seated as delegate from Richland County.

Dr. Thomas Mulligan presented a letter from the Commercial Club of Grand Forks inviting the Association to hold its 1919 convention in Grand Forks. The President stated that the matter would be taken up tomorrow, and he recommended that the meeting be held at about the same time next year as this year, rather than earlier. Dr. Aylen suggested that the President appoint a committee from the city that is elected as the meeting-place, and have them investigate the proper time for the meeting so as not to conflict with other conventions. The President stated that would be taken up later.

The meeting then adjourned.

THE BANQUET

The banquet was held at 6:30 p. m., and Dr. E. M. Darrow presided as toastmaster, introducing the speakers in happy vein. Those responding to toasts were Dr. Henry Wheeler, Mayor of Grand Forks; Lieut. V. H. Stickney, of Dickinson; Dr. Alex Gibson, of Winnipeg, Canada; Dr. Edward Carl Rosenow, of Rochester, Minn. After the banquet the members and guests adjourned to the general meeting hall, and were there addressed by Col. R. J. Blanchard, of Winnipeg, Canada, on the subject of "War Wounds."

FOURTH SESSION—THURSDAY, JUNE 20TH

The House of Delegates convened at 12 M.

and was called to order by the President, Dr. G. M. Williamson. There were present Drs. Sorkness, Grassick, Golseth, Huntley, McGurran, Trainor, Benson, Stackhouse, Whittemore, Bowen, Aylen, Woutat, and Mulligan.

Grand Forks, through the Commercial Club and the Mayor, extended an invitation for the association to meet at Grand Forks in 1919 and the invitation was accepted. The time of meeting was left for the committee of arrangements in connection with the scientific committee to determine. The month of June was preferred.

REPORT OF THE NOMINATING COMMITTEE

E. A. Pray, Valley City, President.
Capt. W. P. Baldwin, Casselton, First Vice-President.
Fred Ewing, Kenmare, Second Vice-President.
H. E. French, University, Third Vice-President.
H. J. Rowe, Casselton, Secretary.
W. F. Sibley, Devils Lake, Treasurer.

Councilors:

E. M. Ransom, Minot, Northwestern District Society.
F. L. Wicks, Valley City, Sheyenne Valley Society.
L. G. Smith, Jamestown, Stutsman County Society.
Charles MacLachlan, New Rockford, Tri-County Society.

Delegate to the American Medical Association, 1919-1920:

Charles MacLachlan, New Rockford.
Alternate, F. W. MacManus, Williston.

We recommend for appointment as members of State Board of Medical Examiners:

H. O. Altnow, Mandan.
H. G. Woutat, Grand Forks.
Paul Sorkness, Fargo.

Member of the Medical Defense Board for five years,
M. W. Roar, Bismarck.

R. W. PENCE.

W. C. AYLEN,

T. MULLIGAN.

Committee.

The report of the committee was adopted.

It was moved and carried that physicians eligible to office and now in the service of their country should be eligible to the elective offices.

Dr. Stackhouse gave notice that he would call up next year for consideration the discontinuance of the Medical Defense.

REPORT OF THE COMMITTEE OF PUBLIC HEALTH To the North Dakota State Medical Association:

Your Committee on Public Health begs to submit the following statistical data covering the five largest cities of the state for the years 1912 and 1917, respectively, showing the death-rate:

	1912	1917	Percentage of increase or decrease
Bismarck	14.0	25.6	71.0 increase
Fargo	14.4	11.2	21.0 decrease
Grand Forks	13.4	10.8	23.0 decrease
Jamestown	20.4	20.2	0.2 decrease
Minot	10.6	15.1	50.0 increase

The death-rates in 1912 are based on the population, as shown in the Federal census of 1910. The rates in 1917 are based on the population shown by the state census of 1915.

The reduction in the death-rate of Fargo in the past five years means a saving, in that city, of sixty lives a year. In Grand Forks the saving amounts to forty lives a year. As a matter of fact, notwithstanding the increase in population, there were fewer deaths in Grand Forks in the year 1917 than in 1912. In the latter year there were 168 deaths, and in 1917 only 147.

What has been done in the way of reducing the death-rate in the two largest cities in the state can be done in all of them, and, considering the present importance of conserving the man power of the Nation, your committee would recommend that the state public health authorities report to the State Council of Defense that in all cities having a death-rate of over 15 per 1,000 population per annum inquiry be made as to the cause of the excessive mortality.

In no way can more effective aid and comfort be given to the enemy than by the reckless destruction of human life, especially of the younger generation, who have to take the place of those who cheerfully offer themselves as sacrifices that our lives and liberties may be protected.

In view of the fact that co-ordination in health activities in the state is necessary for the establishment of an efficient public-health service, your committee has agreed upon a tentative outline to be developed into a model health law for the state as follows:

That the State Board of Health comprise—

1. A Division of Administration and Vital Statistics with a full-time health officer.
2. A Division of Public Health Laboratories and Epidemiology.
3. A Division of Live-Stock and Sanitary Affairs, including milk-inspection, tuberculosis tests for dairy cows, etc.
4. A Division of Sanitary Engineering, which shall include hotel-inspection, and that its officers, when not engaged in such work, shall be field-workers along the lines of vital statistics and child-welfare.
5. A Division for the Study and Prevention of Tuberculosis.

It was the unanimous opinion of your committee that the State Board of Health should have in its personnel men representing each one of the above-named divisions and, in addition to this, should include the Superintendent of Public Instruction, Attorney General, and some layman.

A model law embodying these features should be formulated, and a united effort launched to secure for the state of North Dakota an efficient Public Health Service.

Fargo, N. D.
June 20, 1918.

C. J. MCGURREN,
Chairman.

Adjourned.

H. J. ROWE, M. D. Secretary.

PROCEEDINGS OF THE GENERAL MEETING OF THE ASSO- CIATION

FIRST SESSION—WEDNESDAY, JUNE 19TH

The Association was called to order in the

Knights of Columbus Hall, Fargo, at 10 A. M., by President G. M. Williamson, Grand Forks. The invocation, the address of welcome, and the unfurling of the Service Flag in honor of the members of the medical profession of the State of North Dakota, who have been commissioned to serve the Government in the World War (there are 122 stars in the flag), followed.

INVOCATION AND UNFURLING OF SERVICE FLAG

By BISHOP J. POYNTZ TYLER

Mr. Chairman and Gentlemen of the Medical Profession of the State of North Dakota:

I esteem it a very great privilege and honor in being asked to appear before your body this morning to engage with you in a ceremony which shows that your great profession is responding to the need, not only of our country, but of the world, in this great time of stress and anxiety and searching of heart. I do not feel a stranger among doctors because my father was a physician and my grandfather and a number of my uncles and several of my brother-in-laws and any number of my relatives were doctors. Indeed, before my entrance upon the ministry and since then I have never in all my life, which now exceeds a half a century, paid but one doctor's bill, and that was a misunderstanding, as it were, on the part of the doctor, but not on my part, because at that particular time of my life I felt that I was in a position to render him some service rather than have him render me service, which he was most willing to do. I am a great believer in doctors, and, having had the use of them so frequently during my life, my wife says that if I had to pay them I would very often do without them when I need them.

But I do believe in doctors. I believe there is no profession more noble than yours, and when I remember the magnificent life of my own father and when I recall the splendid life of dozens of splendid physicians whom I have intimately known during my life, I realize that there are no men in all this world who can and do exceed the physicians in the splendid work that they do for humanity.

Of course, there are "skin-flints" among doctors, just as there are among preachers and lawyers and merchants and other professions. Try as hard as we will, there will be some unworthy men who, somehow or other, will creep into the professions, but we do not judge of a profession by those who creep in: we judge of a profession by those who march in through the open door and comply with the great requirements of the profession and not by those who seek and gain entrance by some subterranean passage or some back-door performance. In my profession there are some who are unworthy of their calling, but I thank God that the great bulk of the ministers of the world are very good men. I am happy to believe that the vast majority of our physicians are splendid men and are not exceeded by any class of men in their work for humanity.

So it gives me very great pleasure indeed this morning to appear before you and to thank you as public men interested in the welfare, not only of this great state and of our country, but of the world at large—to thank you for all you have done for our brothers in the flesh, to wish you Godspeed in the days that are ahead

of you, and to invoke upon your deliberations at your annual session the blessing of Heaven and the guidance of God's spirit.

I have been asked this morning to come and assist you in unfurling a banner upon which you have inscribed by means of a star each one of those who have gone from your midst and from your profession from this state in the great war that is now raging. It is quite becoming, I consider it an honor as it is certainly a very great pleasure and privilege, to help you to make this gift and to pay reverence and respect to these splendid men who have gone to fight—to live. And now you will engage with me in saying the Lord's prayer.

(The members joined in saying the Lord's prayer.)

An address of welcome was extended by Mr. Aubrey Lawrence in behalf of the Commercial Club, as follows:

ADDRESS OF WELCOME

Mr. President, Gentlemen of the Medical Profession of North Dakota:

When a few days ago I was requested, because of my connection perhaps with the Commercial Club of this city, to extend to you a few words of greeting, it seemed to me to be necessary to prepare what is designated in the program as "an address." I thought, as we used to think of such matters, that a sort of an oration should be delivered, and that I should attempt to display some eloquence, perhaps, if I were able, but pressure of work and absence from the city would have barred me from that, even if I had not changed my mind.

Afterwards the thought came to me, what perhaps is in all our hearts today, that this is no time for studied eloquence, for mere language or words, and that the best greeting that the people of the City of Fargo could give to you gentlemen today would be just a few simple words from the heart.

There have been times when our greetings have been lightly expressed; there have been times when the hand-clasps have been feebler, and we have passed on our way with but a transient thought of those whom we have met; there have been times when our hearts have failed to respond to each other's greeting of welcome; but that is not today.

This is not the day of words. This is the day when the heart speaks and when the lips alone do not give the service nor give the greeting, and it is in that spirit, gentlemen, that, insofar as I represent the people here in this town, I desire to extend to you a welcome. And when, gentlemen, we have welcomed you, and all that you represent and all that you stand for and all that the men of your profession have stood for and done, we not only open the doors of our houses and the gateway of the city, but we open the pathway to our hearts.

It seems to me, although I have had not much connection with the medical profession, that I have always felt that there was a nobility of purpose and a glorious service in the medical profession that exists nowhere perhaps except in one other, and that the divine profession. Your life is service. You give your energies, your time, your talents, your devotion, your everything to the service of mankind, to the betterment of mankind, to making us physically and mentally and

every other way better and better. The world has changed because of the services of the medical profession, not because they have received fees for what they do, and there is proof that there is none, that has responded to the call for service.

In the last three centuries, it is said, that the average life of the English-speaking working people has been doubled. And why? Simply because the gentlemen of your profession have given to us more than the merchant gives to us, more than the clerk gives to us, more than the lawyer gives to us. You have given us a service that makes us better, stronger, better fitted to cope with the problems of the world. Why, three centuries ago a man fifty years old was an old man; in Shakespeare's time a man of fifty was spoken of as an old man. Today there are gentlemen of your profession fifty years of age that are rendering the most magnificent service a man can render.

Gentlemen, it seems to me, and especially as I listened to Bishop Tyler and thought of what we have represented before us in America today, professions of all kinds, men from every walk of life—whether from the workshop, the store, the farm, or the office—speaking in terms of loyalty and service; and, although other professions have responded nobly, I know of none, gentlemen, and there is proof that there is none, that have responded more nobly than your profession.

Speaking of what has been done by the individual physicians of North Dakota, 122 or 123 out of a membership of your Association of, I think, 403 of about 600 physicians entitled to practice in this state, 123 are commissioned in the Medical Reserve Corps. Over 25 per cent of the numbers enrolled, more than 20 per cent of the total number, have voluntarily given their service, not for their own betterment, but to their country and to the world. Is it any wonder then, gentlemen, that in behalf of the City of Fargo, the people of the City of Fargo, I say it is not only the doors of our houses that are open to you, but the pathway to our hearts?

Gentlemen of the medical profession, the task is glorious. This service has been magnificent. When I think of what the physician is doing over there it seems personal to me; we who have sons who are devoting their lives and who at times will perhaps stand upon the threshold of eternity—when we see that picture and when we add to that picture the figure of the devoted physician standing by, devoting his talents, his heart, his mind, his service, to saving my boy and your boy, voluntarily giving up and sacrificing all that he has—I say to you that my heart is open to the gentlemen of the medical profession.

Gentlemen, your past has been glorious, your future shall be more glorious, and you are physicians of the world. We need you and you render noble service, and in behalf of the City of Fargo I am proud and glad to welcome you here. (Applause.)

The address of welcome was replied to by Dr. James Grassick, who spoke as follows:

RESPONSE TO ADDRESS OF WELCOME

By DR. JAMES GRASSICK

Mr. Lawrence and the Citizens of Fargo:

It affords me much pleasure in behalf of the North Dakota Medical Association to respond to your cordial greeting and words of welcome.

This is not the first time that the physicians of our state have accepted and enjoyed the hospitality of your city, and we should be ungrateful indeed if we did not express our appreciation of these continued courtesies.

In these strenuous times when the doctrines of hate, fear, atrocity, and frightfulness are so rife, and when men's faith in their God, their country, their cause, their fellows, and themselves is being tried as if by fire, it is refreshing, indeed, to receive such open-handed fellowship as has been extended to us on this occasion; and when we return to our homes I trust we shall all feel that it was good for us to be here, and that you will feel that it was good to have us here.

Man is, first of all, a social being and enjoys meeting with his fellows on a plane of equality. Aside from the direct benefit of these meetings from a professional and scientific standpoint, they give us an opportunity as co-workers of becoming better acquainted, and thus removing those barriers of distrust, envy, and selfishness that we too often see even among members of the same profession. They also serve the purpose of establishing a closer relationship and better understanding between the profession of medicine and the general public. There was a time—and not long ago at that—when the practitioner of medicine was surrounded with a halo of privacy, when anything like publicity was regarded as an intrusion inimical alike to the best interests of his patients and the profession. Of late this veil has been ruthlessly removed and the glowing headlight of publicity has been flashed on his actions. He finds his patients' ailments heralded and discussed on the telephone throughout the neighborhood before he has had time to leave the sick-chamber, he finds his diagnoses, prognoses, and treatments subjected to a professional and lay scrutiny that at times is anything but comforting. He finds that his isolation and individuality are being alike annulled. He finds, in short, that he is bound in a thousand ways to his environment, and that individual welfare, professional welfare, and community welfare are all bound together in a larger way than has really been supposed.

As a direct outcome of all this we have a better understanding by the masses of the underlying principles of right living. Twentieth-century medicine has taken the public into its confidence, and declared that there is nothing hid that shall not be revealed. Anything with a suspicion of secrecy or mystery savors of the charlatan and quack. A periodical cannot now lay claim to answering the popular demands unless it has a properly edited health department, and so we have our public-health nurses, social-service workers, lecture and press bureaus, baby weeks, public clinics, dispensaries, and what not. With this campaign for a wider knowledge of things pertaining to individual and community health the ordinary person of today knows more about preventive medicine than did the physicians of the time of our fathers. The results have been felt in the lengthening of the span of human existence, in conserving our vital forces, in decreasing human ills, in alleviating human suffering, and in bettering all those conditions that have to do with life efficiency.

In behalf of the North Dakota Medical Association I must again thank you for your cordial reception, and I trust that our behavior while in your city may be such that you will have no cause to regret having entertained us.

Dr. Paul Sorkness, in behalf of the Cass County Medical Society, presented the Service Flag, which was accepted and responded to by the President, G. M. Williamson.

PRESENTATION OF THE SERVICE FLAG

Mr. President:

On behalf of the members of the Cass County Medical Society, I take great pleasure in presenting to you, as President of the North Dakota Medical Association, this honor flag in which we have tried to represent all the members of the medical profession of the State of North Dakota who have accepted commissions in the United States Army. I again wish to say that we present this to you as President of this Association, and request that you take care of it in the future. (Applause.)

ACCEPTANCE OF THE FLAG

By PRESIDENT WILLIAMSON

Dr. Sorkness, and Members of the Cass County Medical Society:

As President of the North Dakota Association I have great pleasure in accepting this flag. The Association, I am sure, will cherish it and keep it in remembrance of our members who are in service. We know they will do the Association honor wherever they are sent, and it is very kind indeed of the Cass County Society to remember our members who are in the service. We miss them from our meetings today, but they are rendering greater service by the work they are performing for their country.

There will possibly be many more of the members of this Association to enter the service, but, I am sure, all are willing to go if needed. The profession will do its duty whenever called upon.

I thank the Cass County Society for this beautiful flag. (Applause.)

The President read his address, which will appear in our next issue.

Dr. J. W. Bowen, of Dickinson, read a paper on "Some Observations in Gall-Bladder Surgery." The paper was discussed by Dr. V. J. LaRose, of Bismarck; Dr. Fred Ewing, of Kenmare, and the discussion was closed by the essayist.

Dr. H. J. Friesen, Grand Forks, read a paper on "Ophthalmia Neonatorum: the Cause of Preventable Blindness." The paper was discussed by Dr. C. J. McGurren, of Devils Lake; Dr. E. A. Pray, of Valley City; Dr. F. W. MacManus, of Williston; Dr. W. T. Cain, of Underwood; Dr. G. M. Williamson, of Grand Forks; and the discussion was closed by the author.

A recess was taken until 2 P. M. of the same day.

SECOND SESSION—WEDNESDAY, JUNE 19TH

The Association convened at 2 P. M. in the Knights of Columbus Hall, and was called to

order by the President. Dr. Edward Carl Rosenow, of Rochester, Minn., read a paper on "The Etiology and the Treatment of Acute Poliomyelitis." The subject was fully illustrated by moving pictures. The paper was discussed by Dr. S. Oftedahl, of Fargo; Dr. V. J. LaRose, of Bismarck; Dr. L. Van Es, of Fargo; and the discussion was closed by the essayist.

Dr. M. W. Roan, of Bismarck, read a paper on "Colloid Carcinoma of the Abdominal Viscera," with a report of cases and exhibition of a patient. The paper was discussed by Dr. Murdock MacGregor, of Fargo; Dr. Arthur S. Bratrud, of Grand Forks; and the discussion was closed by the essayist.

Dr. A. W. Ide, of Brainerd, Minn., read a paper on "Local Anesthesia in Inguinal Hernia." The paper was discussed by Dr. N. Tromnes, of Fargo; Dr. Olaf Sand, of Fargo; Dr. V. J. LaRose, of Bismarck; Dr. T. Mulligan, of Grand Forks; Dr. P. H. Burton, of Fargo; Dr. Alfred S. Bratrud, of Grand Forks; Dr. Earl M. Watson, of Hope; and the discussion was closed by the essayist.

Col. R. J. Blanchard, of Winnipeg, Manitoba, in the absence of Col. William Webster, D. S. O., read a very interesting paper on his hospital experience in France, which was enthusiastically received by the profession.

An adjournment was taken until 9:30 A. M. the following day.

THIRD SESSION—THURSDAY, JUNE 20TH

The Association met at Knights of Columbus Hall and was called to order by the President.

Dr. Nils Tromnes, of Fargo, read a paper on "A Case of Megacolon with Unusual Complications, with the report of a Case Five Years after Radical Operation." The paper was discussed by Dr. James Grassick, of Grand Forks; Dr. T. Mulligan, of Grand Forks; Dr. A. J. Paulson, of Thief River Falls, Minn.; and the discussion was closed by the essayist.

A bone and joint clinic was conducted by Dr. Alexander Gibson, of Winnipeg, Manitoba. A number of very interesting cases were shown and the clinic was very instructive and greatly enjoyed by the physicians. Dr. Gibson is a wizard in anatomy.

An adjournment was taken until 2 P. M. of the same day.

A luncheon was enjoyed by the Presidents and Secretaries of the component societies at the Annex Hotel, which had been arranged by Dr. N. C.

Callander, Secretary of the Cass County Medical Society. An appreciative and instructive paper was read at the luncheon by Dr. E. M. Ransom, President of the Northwestern District Medical Society.

FOURTH SESSION—THURSDAY, JUNE 20TH

The Association met at the Knights of Columbus Hall, and was called to order by the President. A paper was read by Dr. H. G. Woutat, of Grand Forks, on "Diagnosis of Urinary Calculi." The paper was discussed by Dr. V. J. LaRose, of Bismarck; Dr. Fred Ewing, of Kenmare; and the discussion was closed by the essayist.

On motion, Dr. Edward Carl Rosenow, of Rochester, Minn.; Col. R. C. Blanchard, of Winnipeg, Manitoba; Dr. A. W. Ide, of Brainerd, Minn.; Dr. E. W. Humphrey, of Moorhead, Minn.; Dr. J. H. Oakley, U. S. P. H. S.; and Dr. Jas. Quinn, of St. Paul, Minn.; were made honorary members of the Association and entitled to all the privileges of the floor for discussion.

Dr. J. H. Oakley, U. S. P. H. S., read a paper on "Trachoma." A number of cases of trachoma were exhibited, and were examined by the physician since there had been considerable doubt expressed by some of the doctors in some parts of the state as to the existence and prevalence of the disease. This was a live question, and was discussed by Dr. C. E. Spicer, of Valley City; and Dr. G. Golseth, of Jamestown; and the discussion was closed by the essayist.

In the absence of Dr. J. D. Taylor, of Grand Forks, his paper on "The Use of the Crude Hypochlorite Solution on the Plains of Dakota at the Time of Custer, and Its Use Today as Refined and Perfected by Dakin-Carrel," was read by title.

At the conclusion of the program of papers a "Moving Picture Exhibit of the Dakin-Carrel Technique," was presented. The machine was furnished and operated by Dr. E. W. Humphrey, of Moorhead, Minn. This panorama of the care and manner of treatment of the wounded soldiers by this efficient method was greatly enjoyed by all who witnessed the exhibit, and a vote of thanks was tendered Dr. Humphrey for his timely and generous contribution to the Association's program.

The Association adjourned to meet next year at Grand Forks.

DISTRICT AND COUNTY ROSTER

*In Military Service.

CASS COUNTY MEDICAL SOCIETY

PRESIDENT

Rindlaub, J. H. Fargo

SECRETARY

Callander, C. N. Fargo

Awty, Wm. Fargo
 *Aylen, Jas. P. Fargo
 *Bailey, Fred H. Fargo
 Bailie, W. F. Hunter
 Bakkie, Hans. Lisbon
 *Baldwin, Wm. P. Casselton
 Bennett, C. E. Aneta
 Brown, W. G. Fargo
 Burton, Paul H. Fargo
 *Campbell, T. R. Arthur

*Carpenter, Geo. A. Fargo
 Clark, Horace. Wheatland
 Clark, S. B. Buffalo
 Darrow, E. M. Fargo
 Darrow, Kent E. Fargo
 Gronvold, F. O. Fargo
 Gronvold, A. C. Fort Ransom
 *Hanna, J. F. Fargo
 Huntley, H. B. Leonard
 Kachelmacher, C. Fargo
 Labbitt, L. H. Enderlin
 MacGregor, Murdock. Fargo
 Miller, H. W. Casselton
 Morris, A. C. Fargo
 Nelson, W. P. Knox
 Nichols, Wm. C. Fargo

Oftedahl, Arne. Fargo
 *Oftedahl, Axel. Fargo
 Oftedal, Sverre. Fargo
 *Ostrander, A. J. Enderlin
 Patterson, A. G. Lisbon
 *Patterson, T. G. Lisbon
 Rindlaub, Elizabeth P. Fargo
 *Rindlaub, Martin P. Fargo
 Rowe, H. J. Casselton
 Sand, S. O. Fargo
 Skelsey, A. W. Fargo
 Sorkness, Paul. Fargo
 Tronnes, N. Fargo
 *Wands, E. E. Lisbon
 Weible, R. E. Fargo

DEVILS LAKE DISTRICT MEDICAL SOCIETY

PRESIDENT

Cuthbert, W. H. Crary

SECRETARY

Drew, G. F. Devils Lake
 Arneson, A. O. McVile
 Call, A. M. Rugby
 Carter, J. A. Warwick
 *Engesather, A. D. Brockett
 Fawcett, W. C. Starkweather
 Floew, A. T. Harvey

Hamilton, J. S. Bathgate
 Harris, F. C. Cando
 Horsman, A. T. Devils Lake
 *Jamieson, Geo. V. Devils Lake
 Jones, W. D. Devils Lake
 Lamont, J. G. Dunseith
 Lemieux, D. Dunseith
 Lohrbauer, Ejner. Lakota
 McGurran, C. J. Devils Lake
 McIntosh, G. J. Devils Lake

McMurtry, W. C. Wolford
 *Moeller, Thor. Devils Lake
 *Phillips, J. M. Bisbee
 Roberts, F. J. Cando
 *Sihler, W. F. Devils Lake
 Smith, Clinton. Devils Lake
 *Swenson, A. W. Bisbee
 *Verrett, B. D. Rolla
 Vigland, J. C. Brinsmade
 *Warren, J. W. Leeds
 Wicklund, C. A. Alamo

GRAND FORKS DISTRICT MEDICAL SOCIETY

PRESIDENT

Mulligan, T. Grand Forks

SECRETARY

Friesen, H. J. Grand Forks

Arneberg, J. G. Grand Forks
 *Aylen, Chas. H. Drayton
 Beck, R. H. Lakota
 Bentzen, Olaf. Grand Forks
 *Bratrud, Arthur S. Grand Forks
 Burrows, F. N. Bathgate
 *Campbell, R. D. Grand Forks
 Collestrom, G. W. Northwood
 Cooperman, H. Minto
 *Countryman, J. E. Grafton
 Dean, Alfred. Grand Forks
 Deason, F. W. St. Thomas
 Eggers, Aug. Grand Forks
 Ekern, A. San Diego, Cal.
 Emert, H. F. Sarles
 Engstad, J. E. Grand Forks

Field, A. B. Forest River
 French, H. E. University
 *Galbraith, J. E. Cavalier
 Gislason, G. J. Grand Forks
 Glaspel, G. W. Grafton
 Grassick, Jas. Grand Forks
 Harris, C. B. Pembina
 *Healy, H. H. Devils Lake
 *Irby, M. R. Lankin
 Irwin, S. H. Grand Forks
 Jelstrup, Christian. Petersburg
 *Johnson, J. A. Grand Forks
 Joistad, A. H. Fairdale
 *Kirkham, J. H. Langdon
 Landry, L. H. Walhalla
 Law, H. W. F. Grand Forks
 Lommen, C. E. Fordville
 McLean, R. M. Gilby
 McQueen, W. W. Langdon
 Marsden, C. S. Grand Forks
 *Meland, O. N. Grand Forks
 O'Keefe, Henry. Grand Forks

Peterson, O. T. Northwood
 Porter, W. H. Calvin
 Scott, R. A. Crystal
 Smith, J. C. Thompson
 Stromberg, G. E. Langdon
 Suter, J. C. Grafton
 Taylor, J. D. Grand Forks
 Thompson, A. Y. Larimore
 Towey, J. W. Langdon
 Waas, Chas. Neche
 Wagar, W. D. Michigan
 Waldren, H. M. Drayton
 Walker, J. J. Cavalier
 *Weed, F. E. Park River
 Welch, W. H. Larimore
 Westeen, A. A. Grand Forks
 Wheeler, H. M. Grand Forks
 Williamson, G. M. Grand Forks
 *Wilson, W. C. Grand Forks
 *Witherstone, W. H. Grand Forks
 Woutat, H. G. Grand Forks
 Wylie, A. R. T. Grafton

KOTANA MEDICAL SOCIETY

PRESIDENT

Trainor, M. E. Williston

SECRETARY

MacManus, F. W. Williston

Distad, O. E. Williston
 Hagen, E. J. Williston
 *Jones, C. S. Williston

*Norris, J. L. Westby, Mont.
 Steele, E. G. Plentywood, Mont.
 Windel, H. C. Williston

NORTHWESTERN DISTRICT MEDICAL SOCIETY

PRESIDENT
Ransom, E. M. Minot

SECRETARY
Nestos, P. A. Minot

Aaker, A. O. Velva
Allen, R. W. Towner
Anderson, C. O. . . . Willow City
Blatherwick, W. E. . . Van Hook
*Brigham, F. O. Stanley
Brugman, F. A. Minot
Carr, Andrew. Minot
Craie, O. S. Towner
*Cramond, J. E. Rugby
Critchfield, L. R. . . . Kenmare
Darland, F. L. Froid, Mont.
Devine, J. L. Minot
Durnin, G. A. Bottineau
Erenfeld, H. M. Minot
Ewing, F. Kenmare
Ewing, John. Kenmare
Fisk, D. A. Carpio
Fitzmaurice, E. S. . . . Mohall
Flath, Milford G. . . . Stanley
*Frogner, G. S. Parshall

Fuller, J. D. Plaza
*Ginsberg, Wm. Omence
Grangaard, H. O. . . . Douglas
*Green, E. E. Westhope
Griffin, I. H. Ryder
Grogan, J. B. Flaxton
Halvorson, H. L. . . . Des Laes
Hanson, G. C. Minot
Henderson, S. D. . . . Lansford
*Hillis, S. J. Berthold
Irvine, V. S. Bantry
*Jackman, J. C. Minot
Johns, S. M. Velva
Johnson, J. A. Bottineau
Kermott, L. H. Minot
King, C. J. Columbus
*King, Z. P. Tolley
Knapp, H. G. Minot
*Knutson, K. O. Glenburn
Lancaster, Blake Crosby
McCapnel, Archie D. . . . Minot
*McCannel, A. J. Minot
Mackay, A. R. Bottineau
Moffatt, Geo. Donnybrook
Moreland, J. W. Maxbass
Newlove, J. T. Minot

Nicholson, A. S. Williston
Nugent, O. B. Minot
Overgard, S. Minot
Paulson, A. J.

Thief River Falls, Minn.

*Pence, J. R. Minot
Pence, R. W. Minot
Plourde, W. A. . . . Willow City
Ray, R. H. Garrison
*Ringo, G. R. Minot
Rogers, Joseph Alexander
Rollefson, C. O. . . . Ambrose
*Rudel, G. L. Plaza
Rystad, O. H. Landa
Semple, James. Minot
Smith, J. A. Noonan
Somers, A. J. Portal
Steeves, E. O. Rugby
Stone, E. C. Balfour
Van de Erve, Hubert. . . Sherwood
Welker, A. J. Dogden
*Wheelon, Frank E. . . . Minot
White, S. G. Ambrose
Yeomans, T. N. Minot
*Youtz, H. L. Willow City

RICHLAND COUNTY MEDICAL SOCIETY

PRESIDENT
Durkee, C. A. Dwight

SECRETARY
O'Brien, T. Wahpeton
Bean, O. G. Walcott

Christensen, W. . . . Lidgerwood
Cross, Irving J. . . . Wahpeton
Greenman, N. H. . . . Fairmont
Ivers, M. U. Abercrombie
Jacobs, G. C. Wahpeton
McDonnell, R. H. . . . Hankinson

Ripperton, Sherman. . . Wyndmere
*Ryan, D. E. Hankinson
Sasse, E. G. Lidgerwood
Shields, N. J. Wahpeton
Steele, D. C. Fairmount
Wiig, I. C. J. Wahpeton

SHEYENNE VALLEY MEDICAL SOCIETY

PRESIDENT
LeBien, E. A. McHenry

SECRETARY
Zimmerman, S. A. . . Valley City

Almklov, Lief. Cooperstown
Benson, R. D. Hamaford
Brimi, C. L. Cooperstown
Caldwell, T. J. Wimbledon
Crosby, E. B. Oriska

Hunt, C. E. Valley City
Kellog, P. M. Rogers
Lang, A. A. J. Sanborn
Lewis, T. H. Sutton
*Livingston, W. . . . Valley City
*MacDonald, A. C. . . . Fingal
*MacDonald, A. W. . . Valley City
Nesse, S. A. Nome
Nolti, W. C. Jamestown

Pray, E. A. Valley City
Platou, L. S. Fargo
Platou, L. Litchville
Spicer, C. E. Valley City
Stixrud, T. M. Litchville
Truscott, J. R. Binford
VanHouten, J. Valley City
Wanner, W. B. Wimbledon
*Westley, M. D. . . . Cooperstown
Wicks F. L. Valley City

SIXTH DISTRICT MEDICAL SOCIETY

PRESIDENT
Thelen, W. P. Wilton

SECRETARY
*Schipfer, L. A. Bismarck

Altnow, H. O. Mandan
*Arnson, J. O. Bismarck
Aylen, Walter C. . . . Mandan
Baer, DeWitt Braddock
Barrette, J. H. Driscoll
Benson, O. T. Glen Ullin
Bodenstab, W. H. . . . Bismarck
Brandes, H. A. Hazen
Brandt, A. M. Bismarck
Bunting, F. E. Mandan

Cain, W. T. Underwood
Dunlap, L. G. Bismarck
*Eastman, L. G. Hazen
*Fisher, A. M. Bismarck
Fisher, Stephen. . . . New Salem
Forbes, C. G. Washburn
Gaebe, E. C. Halliday
Gaebe, O. C. New Salem
Gordon, W. L. Washburn
Griebenow, F. F. . . . Bismarck
Hamilton, E. E. . . . New Leipzig
Heineroth, G. E. . . . Turtle Lake
Kranz, M. Mandan
Larabee, S. G. Mandan
LaRose, V. J. Bismarck

*Lipp, G. R. Bismarck
*Lodge, F. B. Steele
MacLachlan, T. M. . . Bismarck
McReynolds, G. E. . . . Goodrich
Mathews, G. A. Napoleon
*Mella, Hugo. Bismarck
Miller, J. P. Mandan
*Nickerson, B. S. . . . Mandan
Plassman, W. F. . . . Golden Valley
*Pryse, T. S. Dawson
*Quain, E. P. Bismarck
Quain, F. D. Bismarck
Ramstad, N. O. Bismarck
Rasmussen, F. P. . . . Center
*Rice, P. F. Solen

SIXTH DISTRICT MEDICAL SOCIETY—Continued.

Roan, M. W.	Bismarck	Smyth, F. R.	Bismarck	Thompson, R. C.	Wilton
Shoregge, C. W.	Bismarck	Spielman, G. H.	Mandan	Timm, J. F.	Emmet
Shortridge, W. R.	Flasher	Stackhouse, C. E.	Bismarck	*Tyrrell, J. B.	Underwood
Simon, John.	Kintyre	Strauss, F. B.	Bismarck	Winchester, H. E.	Hazelton
*Smith, C. C.	Stanton	Stucke, Agnes.	Garrison	Wolverton, W. C.	Linton
		Stucke, E. C.	Garrison		

SOUTHERN DISTRICT MEDICAL SOCIETY

PRESIDENT		Emanuel, H. W.	Milnor	*Meigs, Benj. L.	Edgeley
Brenkle, J. F.	Kulm	Grace, J. B.	Zeeland	Miracle, M. W.	Edgeley
SECRETARY		Grant, Geo.	Wishek	Munier, H. J.	Oakes
Plehn, J. F.	Edgeley	Gunderman, H. R.	Monango	Ribble, Geo. B.	LaMoure
Campbell, C. C.	Ashley	Lyle, W. D.	Havana	Sturgeon, F. H.	Kulm
		Maercklein, F. W.	Oakes		

SOUTHWESTERN DISTRICT MEDICAL SOCIETY

PRESIDENT		Bordwell, F. A.	Marmarth	*Mizener, Mark.	Bowman
Schneider, J. E.	Bowman	Dash, J. L.	Reeder	Nutting, W. W.	Gascoyne
SECRETARY		Ewbank, J. Nelson.	Rhame	Sarchett, G. A.	New England
Whittemore, A. A.	Bowman	Hill, Simon W.	Regent	Schumacher, N. W.	Hettinger
		Maercklein, C. J.	Bowman	*Voss, Carl.	Hettinger

STARK COUNTY MEDICAL SOCIETY

PRESIDENT		Dahl, P. K.	Belfield	Perkins, George A.	Dickinson
*Fischer, L. F.	Dickinson	Davis, H. A.	Dickinson	Schierbaum, A. F. E.	Hebron
SECRETARY		Jameson, A. J.	Sentinel Butte	Smith, Oscar M.	Killdeer
Chernausek, Sam.	Dickinson	Kamman, H. F.	Taylor	Spear, A. E.	Belfield
Bowen, J. W.	Dickinson	Maercklein, O. C.	Dickinson	*Stickney, V. H.	Dickinson

STUTSMAN COUNTY MEDICAL SOCIETY

PRESIDENT		*DePuy, T. L.	Jamestown	Movius, A. H.	Jamestown
Arzt, P. G.	Jamestown	*Earl, H. D.	Jamestown	*Plant, J. H.	Montpelier
SECRETARY		*Gerrish, W. A.	Jamestown	Smith, LeRoy G.	Jamestown
Golseth, G.	Jamestown	Guest, A. W.	Jamestown	Treat, A. M.	Pingree
Buzzell, Chas. P.	Cleveland	Hotchkiss, W. M.	Jamestown	Whitson, J. S.	Streeter
De Puy, R. G.	Jamestown	Longstreth, W. E. J.	Kensal	Wink, Helen K.	Jamestown
		Melzer, S. W.	Woodworth	Wood, W. W.	Jamestown

TRAILL-STEELE MEDICAL SOCIETY

PRESIDENT		Fortun, O. J.	Mayville	Martin, Thomas P.	Mayville
Kjelland, A. A.	Hatton	Glasscock, T. J.	Finley	Nygard, G.	Luverne
SECRETARY		*Heimark, A. J.	Finley	Savre, M. T.	Northwood
Vinje, Syver.	Hillsboro	Hjelle, C. A.	Clifford	Wadel, K. A.	Portland
		Knutsen, O. A.	Buxton	White, W. E.	Mayville

TRI-COUNTY MEDICAL SOCIETY

PRESIDENT		Crawford, John.	New Rockford	Miller, Hugo.	Harvey
Moore, W. H.	Harvey	*Goss, E. L.	Carrington	Niles, C. N.	Cathay
SECRETARY		*Graham, M. P.	Carrington	Olson, O. W.	Oberon
Donker, A. E.	Sykeston	*MacKenzie, J. Ross.	Carrington	Owen, W. R.	Manfred
		MacKenzie, J. Roy.	New Rockford	Owenson, H. A.	Grace City
Brown, Fred.	McClusky	MacLachlan, Chas.	New Rockford	Reimche, R. C.	Harvey
Clark, I. D.	Harvey	*McClusky, O. W.	Carrington	*Swarthout, Ellis F.	Sykeston
Clay, A. J.	Bowden	Matthaei, D. W.	Carrington	Watson, Earl W.	Hope
Clifton, T. A.	Minnewaukan			Vallency, J. H.	Fessenden

ALPHABETICAL ROSTER

Aaker, A. O.	Velva	Crosby, E. B.	Oriska	Gronvold, F. O.	Fargo
Allen, R. W.	Towner	Cuthbert, W. H.	Crary	Gronvold, A. C.	Fort Ransom
Almklov, Lief.	Cooperstown	Dash, J. L.	Reeder	Guest, A. W.	Jamestown
Altnow, H. O.	Mandan	Dahl, P. K.	Belfield	Gunderman, H. R.	Monango
Anderson, C. O.	Willow City	Darland, F. L.	Froid, Mont.	*Hanna, J. F.	Fargo
Arneberg, J. G.	Grand Forks	Darrow, E. M.	Fargo	Hagen, E. J.	Williston
Arneson, A. O.	McVile	Darrow, Kent E.	Fargo	Halvorsen, H. L.	Des Laes
*Arnson, J. O.	Bismarck	Davis, H. A.	Dickinson	Hamilton, E. E.	New Leipzig
Arzt, P. G.	Jamestown	Dean, Alfred.	Grand Forks	Hamilton, J. S.	Bathgate
Awty, Wm.	Fargo	Deason, F. W.	St. Thomas	Hanson, G. C.	Minot
Aylen, Walter C.	Mandan	De Puy, R. G.	Jamestown	Harris, F. C.	Cando
*Aylen, Chas. H.	Drayton	*DePuy, T. L.	Jamestown	Harris, C. B.	Pembina
*Aylen, Jas. P.	Fargo	Devine, J. L.	Minot	*Healy, H. H.	Devils Lake
Baer, DeWitt.	Braddock	Distad, O. E.	Williston	*Heimark, A. J.	Finley
Bailie, W. F.	Hunter	Donker, A. E.	Sykeston	Heinseroth, G. E.	Turtle Lake
*Bailey, Fred H.	Fargo	Drew, G. F.	Devils Lake	Henderson, S. D.	Lansford
Bakkie, Hans.	Lisbon	Dunlap, L. G.	Bismarck	Hill, Simon W.	Regent
*Baldwin, Wm. P.	Casselton	Durkee, C. A.	Dwight	*Hillis, S. J.	Berthold
Barrette, J. H.	Driscoll	Durnin, G. A.	Bottineau	Hjelle, C. A.	Clifford
Bean, O. G.	Walcott	*Earl, H. D.	Jamestown	Horsman, A. T.	Devils Lake
Beck, R. H.	Lakota	*Eastman, L. G.	Hazen	Hotchkiss, W. M.	Jamestown
Bennett, C. E.	Aneta	Eggers, Aug.	Grand Forks	Hunt, C. E.	Valley City
Benson, R. D.	Hannaford	Ekern, A.	San Diego, Cal.	Huntley, H. B.	Leonard
Benson, O. T.	Glen Ullin	Emanuel, H. W.	Milnor	*Irby, M. R.	Lankin
Bentzen, Olaf.	Grand Forks	Emert, H. F.	Sarles	Irwin, S. H.	Grand Forks
Blatherwick, W. E.	Van Hook	*Engesather, A. D.	Brockett	Irvine, V. S.	Bantry
Bodenstab, W. H.	Bismarck	Engstad, J. E.	Grand Forks	Ivers, M. U.	Abercrombie
Bordwell, F. A.	Marmarth	Erenfeld, H. M.	Minot	*Jackman, J. C.	Minot
Bowen, J. W.	Dickinson	Ewbank, J. Nelson.	Rhame	Jacobs, G. C.	Wahpeton
Brandes, H. A.	Hazen	Ewing, F.	Kenmare	Jameson, A. J.	Sentinel Butte
Brandt, A. M.	Bismarck	Ewing, John.	Kenmare	*Jamieson, Geo. V.	Devils Lake
*Bratrud, Arthur S.	Grand Forks	Fawcett, W. C.	Starkweather	Jelstrup, Christian.	Petersburg
Brenkle, J. F.	Kulm	Field, A. B.	Forest River	Johns, S. M.	Velva
*Brigham, F. O.	Stanley	*Fisher, A. M.	Bismarck	*Johnson, J. A.	Grand Forks
Brimi, C. L.	Cooperstown	Fisher, Stephen.	New Salem	Johnson, J. A.	Bottineau
Brown, Fred.	McClusky	*Fischer, L. F.	Dickinson	Joistad, A. H.	Fairdale
Brown, W. G.	Fargo	Fisk, D. A.	Carpio	*Jones, C. S.	Williston
Brugman, F. A.	Minot	Fitzmaurice, E. S.	Mohall	Jones, W. D.	Devils Lake
Bunting, F. E.	Mandan	Flath, Milford G.	Stanley	Kachelmacher, C.	Fargo
Burrows, F. N.	Bathgate	Floew, A. T.	Harvey	Kamman, H. F.	Taylor
Burton, P. H.	Fargo	Forbes, C. G.	Washburn	Kellog, P. M.	Rogers
Buzzell, Chas. P.	Cleveland	Fortun, O. J.	Mayville	Kerniott, L. H.	Minot
Cain, W. T.	Underwood	French, H. E.	University	*King, Z. P.	Tolley
Caldwell, T. J.	Wimbledon	Friesen, H. J.	Grand Forks	*King, C. J.	Columbus
Call, A. M.	Rugby	*Frogner, G. S.	Parshall	*Kirkham, J. H.	Langdon
Callander, C. N.	Fargo	Fuller, J. D.	Plaza	Kjelland, A. A.	Hatton
Campbell, C. C.	Ashley	Gaebe, E. C.	Halliday	Knapp, H. G.	Minot
*Campbell, R. D.	Grand Forks	Gaebe, O. C.	New Salem	*Knutson, K. O.	Glenburn
*Campbell, T. R.	Arthur	*Gallbraith, J. E.	Cavalier	Knutson, O. A.	Buxton
*Carpenter, Geo. A.	Fargo	*Gerrish, W. A.	Jamestown	Kranz, M.	Mandan
Carr, Andrew.	Minot	*Ginsberg, Wm.	Omeme	Labbitt, L. H.	Enderlin
Carter, J. A.	Warwick	Gislason, G. J.	Grand Forks	Lamont, J. G.	Dunseith
Chernausck, Sam.	Dickinson	Glaspel, G. W.	Grafton	Lancaster, Blake.	Crosby
Christensen, W.	Lidgerwood	Glasscock, T. J.	Finley	Landry, L. H.	Walhalla
Clark, Horace.	Wheatland	Golseth, G.	Jamestown	Lang, A. A. J.	Sanborn
Clark, I. D.	Harvey	Gordon, W. L.	Washburn	Larabee, S. G.	Mandan
Clark, S. B.	Buffalo	*Goss, E. L.	Carrington	LaRose, V. J.	Bismarck
Clay, A. J.	Bowden	Grace, J. B.	Zeeland	Law, H. W. F.	Grand Forks
Clifton, T. A.	Minnewaukan	*Graham, M. P.	Carrington	LeBien, E. A.	McHenry
Cooperman, H.	Minto	Grangaard, H. O.	Douglas	Lemieux, D.	Dunseith
*Countryman, J. E.	Grafton	Grant, Geo.	Wishek	Lewis, T. H.	Sutton
Collestrom, G. W.	Northwood	Grassick, Jas.	Grand Forks	*Lipp, G. R.	Bismarck
Craie, O. S.	Towner	*Green, E. E.	Westhope	*Livingston, W.	Valley City
*Cramond, J. E.	Rugby	Greenman, N. H.	Fairmont	*Lodge, F. B.	Steele
Crawford, John.	New Rockford	Grielenow, F. E.	Bismarck	Lohrbauer, Ejner.	Lakota
Critchfield, L. R.	Kenmare	Griffin, I. H.	Ryder	Lommen, C. E.	Fordville
Cross, Irving J.	Wahpeton	Grogan, J. B.	Flaxton	Longstreth, W. E. J.	Kensal

- Lyle, W. D. Havana
 *MacDonald, A. C. Fingal
 *MacDonald, A. W. Valley City
 MacGregor, Murdock. Fargo
 Mackay, A. R. Bottineau
 *MacKenzie, J. Ross. Carrington
 MacKenzie, J. Roy. New Rockford
 MacLachlan, Chas. New Rockford
 MacLachlan, T. M. Bismarck
 MacManus, F. W. Williston
 *McCannell, A. J. Minot
 McCannell, Archie D. Minot
 *McClusky, O. W. Carrington
 McDonnell, R. H. Hankinson
 McGurren, C. J. Devils Lake
 McIntosh, G. J. Devils Lake
 McLean, R. M. Gilby
 McMurtry, W. C. Wolford
 McQueen, W. W. Langdon
 McReynolds, G. E. Goodrich
 Maercklein, F. W. Oakes
 Maercklein, O. C. Dickinson
 Maercklein, C. J. Bowman
 Marsden, C. S. Grand Forks
 Martin, Thomas P. Mayville
 Mathews, G. A. Napoleon
 Matthaei, D. W. Carrington
 *Meigs, Benj. L. Edgeley
 *Meland, O. N. Grand Forks
 *Mella, Hugo Bismarck
 Melzer, S. W. Woodworth
 Miller, H. W. Casselton
 Miller, Hugo. Harvey
 Miller, J. P. Mandan
 Miracle, M. W. Edgeley
 *Mizener, Mark Bowman
 *Moeller, Thor Devils Lake
 Moffatt, Geo. Donnybrook
 Moore, W. H. Harvey
 Moreland, J. W. Maxbass
 Morris, A. C. Fargo
 Movius, A. H. Jamestown
 Mulligan, T. Grand Forks
 Munier, H. J. Oakes
 Nelson, W. P. Knox
 Nesse, S. A. Nome
 Nestos, P. A. Minot
 Newlove, J. T. Minot
 Niles, C. N. Cathay
 Nichols, Wm. C. Fargo
 Nicholson, A. S. Williston
 *Nickerson, B. S. Mandan
 Nolti, W. C. Jamestown
 *Norris, J. L. Westby, Mont.
 Nugent, O. B. Minot
 Nutting, W. W. Gascoyne
 Nygard, G. Luvne
 O'Brien, T. Wahpeton
 O'Keefe, Henry. Grand Forks
 Oftedahl, Arne. Fargo
 *Oftedahl, Axel. Fargo
 Oftedal, Sverre. Fargo
 Olson, O. W. Oberon
 *Ostrander, A. J. Enderlin
 Overgard, S. Minot
 Owen, W. R. Manfred
 Owenson, H. A. Grace City
 Patterson, A. G. Lisbon
 *Patterson, T. G. Lisbon
 Paulson, A. J. Thief River Falls, Minn.
 *Pence, J. R. Minot
 Pence, R. W. Minot
 Perkins, Geo. A. Dickinson
 Peterson, O. T. Northwood
 *Phillips, J. M. Bisbee
 *Plant, J. H. Montpelier
 Plassman, W. F. Golden Valley
 Platon, L. S. Fargo
 Platon, L. Litchville
 Plehn, J. F. Edgeley
 Plourde, W. A. Willow City
 Porter, W. H. Calvin
 Pray, E. A. Valley City
 *Pryse, T. S. Dawson
 *Quain, E. P. Bismarck
 Quain, F. D. Bismarck
 Ramstad, N. O. Bismarck
 Ransom, E. M. Minot
 Rasmussen, F. P. Center
 Ray, R. H. Garrison
 Reimche, R. C. Harvey
 Ribble, George B. La Moure
 *Rice, P. F. Solen
 Rindlaub, Elizabeth P. Fargo
 Rindlaub, John H. Fargo
 *Rindlaub, Martin P. Fargo
 *Ringo, G. R. Minot
 Ripperton, Sherman. Wyndmere
 Roan, M. W. Bismarck
 Roberts, F. J. Cando
 Rogers, Joseph Alexander
 Rollefson, C. O. Ambrose
 Rowe, H. J. Casselton
 *Rudel, G. L. Plaza
 *Ryan, D. E. Hankinson
 Rystad, O. H. Landa
 Sand, S. O. Fargo
 Sarchett, G. A. New England
 Sasse, E. G. Lidgerwood
 Savre, M. T. Northwood
 Schierbaum, A. F. E. Hebron
 *Schipfer, L. A. Bismarck
 Schneider, J. E. Bowman
 Schumacher, N. W. Hettinger
 Shoregge, C. W. Bismarck
 Shortridge, W. R. Flasher
 Scott, R. A. Crystal
 Semple, James. Minot
 Shields, N. J. Wahpeton
 *Sihler, W. F. Devils Lake
 Simon, John. Kintyre
 Skelsey, A. W. Fargo
 *Smith, C. C. Stanton
 Smith, Clinton. Devils Lake
 Smith, J. A. Noonan
 Smith, J. C. Thompson
 Smith, LeRoy G. Jamestown
 Smith, Oscar M. Killdeer
 Smyth, F. R. Bismarck
 Somers, A. J. Portal
 Sorkness, Paul. Fargo
 Spear, A. E. Belfield
 Spicer, C. E. Valley City
 Spielman, G. H. Mandan
 Stackhouse, C. E. Bismarck
 Steele, D. C. Fairmount
 Steele, E. G. Plentywood, Mont.
 Steeves, E. O. Rugby
 *Stickney, V. H. Dickinson
 Stixrud, T. M. Litchville
 Stone, E. C. Balfour
 Strauss, F. B. Bismarck
 Stromberg, G. E. Langdon
 Stucke, Agnes. Garrison
 Stucke, E. C. Garrison
 Sturgeon, F. H. Knm
 Suter, J. C. Grafton
 *Swarthout, Ellis F. Sykeston
 *Swenson, A. W. Bisbee
 Taylor, J. D. Grand Forks
 Thelen, W. P. Wilton
 Thompson, A. Y. Larimore
 Thompson, R. C. Wilton
 Timm, J. F. Emmet
 Towey, J. W. Langdon
 Trainor, M. E. Williston
 Treat, A. M. Pingree
 Tronnes, N. Fargo
 Truscott, J. R. Binford
 *Tyrell, J. B. Underwood
 Vallengy, J. H. Fessenden
 Van de Erve, Hubert. Sherwood
 Van Houten, J. Valley City
 *Verrett, B. D. Rolla
 Vigland, J. C. Brinsmade
 Vinje, Syver Hillsboro
 *Voss, Carl Hettinger
 Waas, Chas. Neche
 Wadel, K. A. Portland
 Wagar, W. D. Michigan
 Waldren, H. M. Drayton
 Walker, J. J. Cavalier
 *Wands, E. E. Lisbon
 Wanner, W. B. Wimbledon
 *Warren, J. W. Leeds
 Watson, Earl W. Hope
 *Weed, F. E. Park River
 Weible, R. E. Fargo
 Welch, W. H. Larimore
 Welker, A. J. Dogden
 Westeen, A. A. Grand Forks
 *Westley, M. D. Cooperstown
 Wheeler, H. M. Grand Forks
 *Wheeler, Frank E. Minot
 White, S. G. Ambrose
 White, W. E. Mayville
 Whitson, J. S. Streeter
 Whittemore, Arthur A. Bowman
 Wicklund, C. A. Alamo
 Wicks, F. L. Valley City
 Wiig, I. C. J. Wahpeton
 Williamson, Geo. M. Grand Forks
 *Wilson, W. C. Grand Forks
 Winchester, H. E. Hazelton
 Windel, H. C. Williston
 Wink, Helen K. Jamestown
 *Witherstine, W. H. Grand Forks
 Wolverson, W. C. Linton
 Wood, W. W. Jamestown
 Woutat, H. G. Grand Forks
 Wylie, A. R. T. Grafton
 Yeomans, T. N. Minot
 *Youtz, H. L. Willow City
 Zimmerman, S. A. Valley City

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
H. J. ROWE, M. D. - - - Casselton, N. D.
H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

AUGUST 15, 1918

"MINNESOTA MEDICINE" THE JOURNAL PROMISED AND THE JOURNAL DELIVERED

From the date of the adoption of an official organ by the Minnesota State Medical Association, a dozen or more years ago, the *St. Paul Medical Journal* sought to become such official paper, but the terms upon which it offered, from time to time, to assume such relation to the State Association form a series of comedies, its publishers (the Ramsey County Medical Society) seeming to think that the Association was without dignity or common sense.

In none of their offers prior to that of 1916 was the question of an *ethical* journal raised, and for obvious reasons; and this point was robbed of its "pull," its efficacy, when it was understood that the Association's contract with its official journal gave the Association absolute control over all matter published therein. The point was not again mentioned, but the stress was laid upon the insignificant size (quantity of matter published) of both the *St. Paul Medical Journal* and THE JOURNAL-LANCET. A big journal, one worthy of the medical profession of Minnesota, was wanted—a journal that would provide space for the papers read before all the major societies of the state. "Bigness" seemed to be a telling point.

A committee of five was appointed to consider the matter, and to submit the subject to the component societies of the State Association for a

referendum vote, and to do so within six months, the committee's findings to be submitted at the next annual meeting of the Association.

A St. Paul man, who was a champion of the *big* journal suggestion, was made chairman of the committee of five, composed of two St. Paul men, two Minneapolis men, and one man outside of the Twin Cities.

At an early meeting of the committee, the chairman was instructed to canvass the matter with the secretaries and journals of other states. Long after the expiration of the six months named as the time within which the referendum vote was to be taken, the chairman called another meeting of the committee, when the subject of establishing a state journal to be owned by the Association was voted upon. The vote stood four to one against such action, as reported at the next meeting, held at St. Paul in October, 1917. The chairman made a minority report, in which a glowing vision of a big journal and big profits and everything big was pictured before the House of Delegates. The majority report made by four members of the committee was a brief "no" to the question of publishing a journal by the Association.

When inquiry was made concerning the referendum vote of the component societies as required in the resolution to appoint this committee, the chairman of the committee and the author of the minority report, explained that no such vote was taken, and he generously and manly assumed responsibility for failure to take it; but his generosity and his manliness went glimmering in his explanation for this breach of propriety and justice. He said he was sick in January, and this, together with the difficulty of getting answers to the questionnaire he sent to the state secretaries, left no time for the referendum vote; and he added that such a vote was a matter of *no consequence*.

To every clear-thinking man it is evident that the chairman of the committee was the champion of the *St. Paul Medical Journal*, and that he deliberately prevented a referendum vote, which might have been taken at any time within the year, the matter of time being a minor consideration, and one which any body of fair-minded men would have waived so long as it did not affect the vote authorized to be taken. No group of professional men is justified in ignoring in one annual meeting a simple and just recommendation made at a previous annual meeting. Such action is, fortunately, left to dirty

The House of Delegates, at the smallest meeting of such House the writer ever attended, adopted the minority report, and they got for their reward a monthly journal called *Minnesota Medicine*, which has now been published eight months. An examination of the eight issues fails to show the slightest evidence that the men who induced the Association to undertake the project by fair and specific promises of definite things to be done ever entertained a thought of carrying out their promises.

Instead of a big journal—big as compared with THE JOURNAL-LANCET—*Minnesota Medicine* has given in its eight issues an average of 40 pages a month as against an average of 68 pages a month in THE JOURNAL-LANCET for the year 1917.

Thus, instead of giving the Association a *bigger* journal than it received in 1917, say, bigger by 50 or 100 per cent, as might reasonably have been expected from the promises made, the average number of pages delivered to date would have to be increased by 70 per cent even to *equal* the number of pages given to the Association in 1917, and by more than 100 per cent to fulfill in a moderate way the promises made and upon which favorable action was obtained from the House of Delegates at the expense of committing a grave impropriety in denying the component societies a properly and unanimously ordered referendum vote by the 1916 House of Delegates.

Will the House of Delegates of 1918 set its approval upon such an act of perfidy, and make this act a precedent?

CLIMATIC PAINS

The majority of medical men are united in the belief that there is something in the atmosphere that is probably due to the varieties of climate and the unseasonable year and that is accountable for a chain of symptoms which are quite easily recognized. It seems as if the present epidemic, if it may be called an epidemic, is one similar to some type of influenza. Most of the patients who are sufferers, complain of acute muscular pains, with only a moderate degree of temperature, but with a maximum degree of fatigue, as well as persistent and recurrent periods of aches and pains. It is a golden opportunity to try out the serum therapy; and, from many experiments and from the varied combinations of vaccines, one has unlimited scope to attempt to locate the prevailing infection. So far the sera have not seemed to fulfill our expect-

tations. Particularly for the reason that the infection cannot be isolated; and, if isolated by blood-cultures, it seems of an extremely dubious type. Certainly, these cases do not respond as many of them do, and you come to the combined influenza serum, although this serum and the other combined sera contain enough antitoxins to check the pains and aches and fatigue which have been so common. Then the ordinary medicinal forms of treatment which have been employed,—salol, quinine, and strychnia, and other medicinal agents, such as, we all have a preference for,—do not seem to be any more efficacious than the serum treatment. So far the eliminative method of treatment is preferable to most anything else. Hot packs, cabinet baths, salt baths, hot scrubs, and massage are of more benefit than most of the medicinal agents.

In addition to the above-mentioned eliminative methods a searching laxative is usually beneficial, and to the old timer calomel still recommends itself, followed, if necessary, by a saline.

Rest is also important, and, if the patient is taken in time, a few days in bed, with hot baths, packs, massage, offer the best forms of relief and even then there is apt to be a recurrence of all of these distressing and discomforting symptoms of an unknown infective origin.

"GIVE THEM A CHANCE TO PLAY"

The birthright of every child to an abundance of clean, healthful, stimulating play has long been recognized by physicians, educators, and social economists; and the public is at last being aroused to insist upon a fulfillment of that right.

Minneapolis is a city exceptionally favored by nature. She has broad lakes and vast parks. With an area equal to that of Paris, her population is only one-seventh of the population of the French capital; yet, with all her rare inducements to civic health, there are still a woeful number of pale and stunted children within her confines. Not lack of nourishing food alone is to blame for their frail anemic condition; quite as often the cause is the congested district in which they live,—a district which provides no safe, clean, airy play-space where they may exercise limbs and lungs.

To remedy this evil without delay, the Woman's Council for National Defense, and the Anti-Tuberculosis Committee, and the Fresh Air and Outing Association of Minneapolis are co-operating in the work of taking the children daily from these over-crowded neighborhoods to such spaci-

ous parks as Glenwood and Riverside, where they play under careful guardianship.

Because it is recognized that a healthy, well-nourished, well-exercised body is a natural enemy to the tubercle bacillus, especial pains will be taken to see that these advantages are enjoyed by the puny, undersized children whose frail constitutions predispose them to contract the white plague, but whose power of resistance can be built up by proper exercise and food. A list of several hundred such children has already been obtained.

The importance of play in the physical, mental, and moral development of the children has been eloquently pointed out by Denis McCarthy in one of his verses:

"Give them a chance for innocent sport,

Give them a chance for fun,

Better a playground plot than a court

And a jail when the harm is done!

Give them a chance—if you stunt them now,

Tomorrow you'll have to pay

A larger bill for a darker ill,

So give them a chance to play!"

MEDICAL DEFENSE IN MALPRACTICE SUITS

Whether it is wise for our State Medical Associations to carry on the so-called medical defense feature of associational work, is a question not to be decided off-hand, for it involves principles too complex to be comprehended and settled as the result of a debate covering an hour or so, which is about the limit of time given these discussions at associational meetings.

The report of the Committee on Medical Defense, made to the South Dakota State Medical Association, at its last annual meeting, was published in these columns, and contained much interesting and valuable information, which was obtained by means of a questionnaire sent to all the State Associations of the country. Some of this information, together with some of the opinions expressed, will doubtless be new to most of our readers.

Unless the defense feature of the State Associations has other than a personal value to a part or a class of the membership, however relatively large this group of members may be, it should be abolished. If, on the other hand, it contributes, directly or indirectly, to the furtherance of the work of the profession, it should be retained, either in its present or in a modified form. Malpractice suits are not wholly an evil, for they

may tend to lessen certain kinds of malpractice that discredits scientific medicine; and it is pointed out in some of the answers to the questionnaire of the committee of the South Dakota Association that defense of men clearly guilty of malpractice should not be undertaken by a State Association, although provision against such a course on the part of the State Associations is not made, we believe, in even a majority of them. One Association goes so far as to provide in its organic law that if one of its members gives testimony in a malpractice suit against a fellow-member, he shall be expelled from the Association. Such a provision has been advocated for adoption by other associations, but we do not believe it has been adopted in any other body of physicians than the one referred to. It is, of course, wholly wrong, and its effect might be pernicious. With such a provision barring expert testimony from a plaintiff, the court would, beyond a doubt, accept lay, in lieu of expert, testimony; and the jury would probably give the lay testimony on behalf of the plaintiff more consideration than the expert testimony of the defendant.

The feeling generally extant among jurors, that medical men stand together regardless of the facts in any case, has led, beyond doubt, to some very unjust and very large verdicts; and it is possible that the policy of the medical defense feature of a state medical association, tends to create the prejudice that makes these unjust verdicts possible and even imminent.

The cost of such defense is very small when verdicts are excluded from the insurance, as is the case in practically all medical associations; but the cost should not wholly determine the adoption of a plan with many objections to it. It may be that the objections will be eliminated by experience, but, until they are so eliminated, a wise course cannot be clearly seen in the matter.

The South Dakota Association voted to take up the commercial insurance, and will make a contract with one of the commercial companies, provided enough policies can be written to obtain the reduced rates offered.

We shall watch the results of this plan with great interest.

SURGICAL INSTRUMENTS FOR FRANCE AND BELGIUM

Dr. W. W. Keen, of Philadelphia, is collecting surgical instruments and money for the purpose

of equipping the offices of Belgian and French surgeons upon their return to their home towns after the war. The need for such equipment will be so urgent that, if it is met, it must be met in advance, and Dr. Keen, foreseeing this, shows wisdom in his plan.

Dr. John M. Robinson, of Duluth, with the approval of the St. Louis County Medical Society, took up the matter in that section of the state, and he authorizes us to say that every physician of the state is invited to send one or two instruments, or money to buy the same, to the State Association at its annual meeting this month in Duluth. They can be sent direct to Dr. Robinson (413 Providence Building, Duluth), who will make an exhibit of the same at the meeting if enough instruments and money are sent to justify an exhibit.

If a physician has a good instrument which he desires to donate, but lacks time for its repair, he can send it along and authorize Dr. Robinson to have it sharpened and repaired at the donor's expense.

Those who cannot attend the meeting, can send their instruments by a friend or by mail.

GREETINGS TO DR. H. W. HILL

THE JOURNAL-LANCET extends its hearty greeting to Dr. H. W. Hill, who has returned from Canada to resume his work as Executive Secretary of the Minnesota Public Health Association. Dr. Hill is one of the best equipped men in this line in the country, and he returns to Minnesota at a very opportune time, when a greater work than ever yet accomplished in this line is made possible.

Dr. Hill's series of papers on public health work published in our columns, has been republished in book form by the MacMillan Company, of New York and London, and is a standard in its class.

Dr. Hill is available as a lecturer on public health topics, and he should be heard in every city and village in Minnesota before medical, educational, and health societies.

A "CHIROPATH"

A news item in our last issue said "Dr. G. B. Danalz," of Benson, was in Chicago taking a course in x-ray work. And now a subscriber asks us if we knew that this man is a "chiropractor." No, we did not know it, but we are not sorry that we gave him a notice of this kind. To be sure we are not putting, at least knowingly, men of this character into the class of doctors

with whose conduct and character and movements we are concerned, and yet that was a significant item—or would have been had we labeled the gentleman as a chiropractor, as we should have done had we known of his accomplishments entitling him to this "honor."

If the chiropractors will learn enough about x-ray work to use it in the diagnosis of traumatic injuries, they will learn that surgery is sometimes necessary to save limbs and life, and will thus benefit some of the poor, ignorant dupes who become the victims of all such charlatans; and at the same time they will let the public know how limited is the field of their work, even if it were in the hands of educated practitioners.

It is indeed surprising how many of these so-called doctors are at work in the Northwest, especially in the larger cities. Every batch of news items that come to our news editor's desk contains from one to a dozen names of such men, with the title "Dr." or "Doc" before each. A careful clerk in our office sifts the chaff out of the lot, but now and then, as in the news item pointed out by our correspondent, a "chiropath" will slip through the meshes and find himself in good company.

THE JOURNAL-LANCET has not sinned much in this direction, it is glad to be able to say; and when it does sin, proper correction will be made if its sin is pointed out to it by its readers.

CORRESPONDENCE

A CORRECTION

TO THE EDITOR:

I want to correct a news item which appeared in the August 1st number of THE JOURNAL-LANCET.

According to that item our firm is given as Drs. Witherstine, Wilson & Engstad. Also according to this item I am to assist Dr. Engstad. These statements are incorrect. The firm is known as Drs. Witherstine, Wilson & Hunt, as I have become a member of the firm. Dr. Engstad is not a member of the firm, but is renting office room of us. During the absence of Drs. Witherstine and Wilson (Dr. Witherstine is now in the Service and Dr. Wilson has orders to report for duty in two weeks) I shall carry on their practice.

I also wish to correct the statement that I belonged to the M. R. C. When war was declared I was called out as regimental surgeon of the

1st N. D. Inf. N. G., and served with them until October, 1917, when I was given command of a field hospital, which I took to France.

Please make these corrections in your next number as the former news item was entirely incorrect.

Sincerely,

CHARLES E. HUNT, M. D.

Ex-Major M. C. U. S. N. G.

Grand Forks, N. D., August 8, 1918.

NEWS ITEMS

Dr. J. C. R. Charest has moved from Oklee to Argyle.

Dr. F. H. Farrand has moved from Sauk Center to St. Paul.

St. Joseph's Hospital of St. Paul will build a home for its nurses.

Dr. R. L. Laney, of Brown Valley, has resigned from the M. R. C.

Dr. Theodore Bratrud, of Warren, has resigned from the M. R. C.

Drs. J. L. Delmore and J. B. Muir, of Roseau, have formed a partnership.

Dr. C. J. Holman has been appointed health commissioner of Mankato.

Dr. H. A. Beaudoux, of St. Paul, has accepted a commission as captain in the M. R. C.

Thirty-eight cases of trachoma have been found in Itasca County through a survey of the schools.

Dr. D. J. Paradine has moved from Floodwood, where he has practiced several years, to Cloquet.

The budget system has been adopted for the Minneapolis City, Lymanhurst, and Hopewell Hospitals.

Venereal disease remedies will no longer be sold by druggists without a prescription from a physician.

Dr. G. K. Hagaman, of Anoka, has moved to Minneapolis, and will make children's diseases his specialty.

Seventeen nurses of St. Luke's Hospital Training School of Duluth have volunteered for Red Cross work abroad.

Drs. A. E. Benjamin and Karl H. Schmidt, of Minneapolis, have accepted commissions of captains in the M. R. C.

Dr. O. N. Nelson, of St. Paul, will have charge

of the practice of Dr. M. C. Piper while Dr. Piper is absent in war service.

Under date of August 1, the War Department announces that 1,000 nurses a week for the next two months will be needed.

Dr. C. J. Stroberg, of Chicago, will have charge of the work of Dr. Allen Garvey, of Virginia, who has left for war service.

Dr. A. W. Shaw, of Buhl, opened his new hospital building the first of the month. The new building cost over \$50,000.

It is said that only one soldier's death has been traceable to the neglect of an American doctor, and this doctor is now in the penitentiary.

Lieut. N. G. Mortensen, of St. Paul, a member of Field Hospital 135, located at Camp Cody, N. M., has been promoted to the rank of captain.

Major A. J. McCannel, of Minot, N. D., has been transferred from the Schofield Barracks, H. I., to the Department Hospital at Honolulu, H. I.

Dr. T. N. Owen has moved from Nemo, S. D., to Lead, S. D. He is on the staff of physicians and surgeons of the Homestake Mining Company.

Surgeon-General Gorgas, with a staff of five officers, visited the Mayo Clinic last week to inspect the work of training medical officers being done there.

Dr. R. R. Randall, of Miles City, Montana, has returned from New York, where he has been doing postgraduate work in obstetrics and diseases of children.

Hospital Unit No. 26, generally known as the Minnesota University Hospital Unit, reached France a few days ago, and all its members are in excellent health.

Fifty posters showing the Federal and Minnesota State plans of combating social diseases, will form an exhibit to be shown this fall at all county fairs in Minnesota.

A man has been traveling through South Dakota in a high-grade Packard car claiming to be an optical expert from Minneapolis, and taking in the gullible at very high rates.

Dr. E. W. Hansen, a graduate of the University Medical School, now in France, has been commended for bravery, and advanced from the rank of lieutenant to that of captain.

The Sisters of St. Joseph's Hospital at Brainerd have organized at the request of the Government a training school for nurses, which will be affiliated with St. Mary's Hospital of Duluth.

Miss Lydia Keller, of St. Paul, has been re-appointed by Governor Burnquist a member of the State Board of Examiners of Nurses. Miss Keller is the secretary of the board, and her efficiency has long been recognized.

The Patriotic Meeting, to be held on the evening of Aug. 29 as a special feature of the annual meeting of the Minnesota State Medical Association, promises to be a really big affair, one well worth a trip to Duluth to attend.

The Sisters of St. Luke's Hospital of Aberdeen, S. D., gave a reception and banquet to the members of the Hospital's staff who have joined the M. R. C., as follows: Drs. R. D. Alway, J. F. Adams, T. P. Devereaux, W. D. Farrell, B. C. Murdy, and J. D. Whiteside.

At the annual meeting of the Wabasha County Medical Society, held last month at Wabasha, the following were elected officers for the current year: President, Dr. E. H. Bayley; vice-president, Dr. J. A. Slocumb; secretary-treasurer, Dr. W. F. Wilson; delegate, Dr. M. J. Shaughnessy.

American medical men in the hospitals of France are sending exceedingly interesting and informing letters for publication in home papers, and the reader of them gets a glimpse of the war unequalled in the correspondence of the best trained writers for the metropolitan newspapers and magazines.

The Shriners of Sioux Falls, S. D., last month gave the physicians of that city who have been called to war service, a banquet that was marked by a good-will and godspeed highly appreciated by the volunteers in the M. R. C., who are as follows: Drs. W. F. Keller, E. L. Perkins, F. I. Putnam, R. G. Stevens, and Guy Van Demark.

The baby clinics that have been held throughout Minnesota for the past month or two, and which are to continue, have been largely attended, giving the work promise of large success in the saving of infant life. Over six hundred and fifty babies were examined in New Uhm; and in other cities and towns like percentages of the full infant population were examined.

Dr. H. W. Hill, the efficient executive secretary of the Minnesota Public Health Association, who was granted a leave of absence two years ago, and during that time has been engaged in public health work for the Canadian Government, has returned to Minnesota to resume his old position. On another page THE JOURNAL-LANCET extends its editorial greeting to its long-lost friend.

The visit to the Twin Cities last week of Surgeon General Gorgas and party, including Col. W. J. and Major C. H. Mayo, left the impression that a rehabilitation camp will be located at Fort Snelling, to include the Miller Memorial Hospital and Marlborough apartment buildings in St. Paul, in co-operation with the Dunwoody Institute in Minneapolis and the State University.

Secretary Rowe of the North Dakota State Medical Association in his annual report (see page 462) spoke of the evil that results from the removal of physicians from the country to the cities in war time. The Committee on Officers' Reports (see page 470), dealing with the subjects, advises all physicians practicing in the country to remain in their fields for the present.

The members of the Montana State Committee of the Medical Section of the Council of National Defense met at Helena last month and formed a branch of the Volunteer Medical Service Corps, electing officers as follows: Chairman, Dr. Donald Campbell, of Butte; secretary, Dr. W. F. Cogswell, of Butte. The new board will aid the government in classifying physicians eligible for the new corps.

Women as reconstruction aids are now wanted by the Medical Department of the Army. The positions are practically permanent and the pay good, namely, \$50 per month for home service and \$60 for foreign service, in addition to allowances for living expenses. Such aids are divided into two sections: (1) women trained in massage and other forms of physiotherapy, and (2) those trained in simple hand-crafts.

The absence in war service of members of the staff of the Medical School of University of Minnesota, and the death of Dr. Frank C. Todd, have led to the following temporary appointments: Dr. Arthur C. Strachauer, of Minneapolis, to be acting director of the Department of Surgery; Dr. William R. Murray, of St. Paul, acting director of the Department of Ophthalmology; and Dr. Ernest T. F. Richards, of St. Paul, acting chief of the Department of Medicine.

The Council of National Defense has just announced that 80,500 cases of venereal diseases have been found in the army since Sept. 21, 1917; and it is estimated that in over 65,000 cases these diseases were contracted before the men entered the service. These figures leave only 20,500 cases where the disease was contracted since the soldiers entered the service. This shows that only one-fourth of the cases originated within the per-

iod of army service. These official figures should be remembered.

Dr. A. T. Mann, of Minneapolis, who left this week for Camp Dodge, Iowa, to begin active service as captain in the M. R. C., recently formed a partnership with Dr. Henry C. Sturh under the firm name of Drs. Mann & Sturh. For the past two years Dr. Sturh has been associated with Dr. Mann in work at the University Hospital, and he has also been engaged in surgical work elsewhere for several years. Capt. Mann expects to be at Camp Dodge about a month, and then hopes to go to France.

RECENT NEW ASSIGNMENTS OF NORTH-WESTERN MEDICAL OFFICERS

Minnesota—

To Camp Dodge, Iowa: Lieut. C. J. McGuire, Altura; Lieut. Andrew Guillixson, Briceyn.

To Camp Grant, Ill.: Capt. M. C. Welch, St. Paul; Lieut. O. E. Nelson, Minneapolis; Lieut. D. D. Turna-cliff, St. Paul.

To Camp Greene, N. C.: Capt. W. C. Chambers, Blue Earth; Lieut. B. S. Bohling, Sandstone.

To Camp Custer, Mich.: Capt. A. C. Maynihan, Sauk Centre; Lieut. D. E. Nelson, Brainerd; Capt. H. B. Grimes, Madelia; Lieut. G. C. Roskilly, Deer Creek.

To Camp Sherman, Ohio: Lieut. H. J. Hartig, Minneapolis; Lieut. R. O. Urban, Minneapolis.

To Whipple Barracks, Ariz.: Capt. L. H. Fales, Stevensville.

To Camp Zachary Taylor, Ky.: Capt. M. J. Lynch, Minneapolis; Capt. J. W. Andrist, Owatonna.

To Fort Oglethorpe, Ga.: Capt. C. P. Robbins, Winona; Lieut. R. S. Forbes, West Duluth; Major A. R. Colvin, St. Paul; Capt. F. H. Rollins, St. Charles; Capt. T. J. Maloney, St. Paul; Lieut. G. T. Nordin, Minneapolis; Lieut. S. M. Johnson, Buhl.

To Fort Riley, Kas.: Capt. E. R. Barton, Frazee; Capt. G. F. Lemke, St. Paul; Capt. A. A. Tofte, Pine City; Capt. W. M. Hursh, Grand Rapids; Capt. C. E. Fawcett, Stewartville; Lieut. W. J. Kucera, Hutchinson; Lieut. G. M. Holland, Spring Grove; Capt. J. L. Miller, Breckenridge; Lieut. M. P. Morse, LeRoy; Lieut. A. Van B. Denman, Mankato; Lieut. F. G. Benn, Minneapolis. Lieuts. Joseph Finberg, and S. S. Hesselgrave, St. Paul.

To New Haven, Conn.: Capt. R. I. Hubert, St. Paul. To Washington, D. C.: Capt. A. S. Hamilton, Minneapolis; Lieut. W. B. Martin, Fergus Falls.

To Camp Lee, Va.: Lieut. C. H. Johnson, Spring Valley.

Montana—

To Camp Fremont, Calif.: Capt. E. C. Anderson, Missoula.

To San Francisco, Calif.: Lieut. W. I. Firey, Round-up.

To Fort Douglas, Utah: Lieut. L. C. Shwat, White Sulphur Springs.

To Fort Oglethorpe, Ga.: Capt. A. G. Fuller, Missoula.

To Fort Riley, Kas.: Lieut. B. I. Townsend, Crow Agency; Lieut. C. W. Dawe, Great Falls; Lieut. Lawrence Stevens, Laurel; Capt. D. S. MacKenzie, Havre.

To Whipple Barracks, Ariz.: Capt. L. H. Fales, Stevensville.

To Camp Lewis, Wash.: Capt. E. F. Dodd, Missoula.

To Fort Logan: H. Roots, Ariz. Lieut. H. A. Mac-Millan, Dillon.

North Dakota—

To Camp Dodge, Iowa: Capt. A. M. Fisher, Bismarck; Lieut. W. S. Cherry, Enderlin.

To Fort Oglethorpe, Ga.: Lieut. L. F. Fisher, Dickinson.

South Dakota—

To Camp Dodge, Iowa: Capt. J. D. Whitside, Aberdeen; Capt. E. M. Stansburg, Vermilion; Lieut. Rezin Reagan, Garretson; Lieut. R. G. Stevens, Sioux Falls; Lieut. M. L. Stiffler, Yankton.

To Camp Fremont, Calif.: Lieut. C. R. Senescall, Vebian.

To Camp Grant, Ill.: Capt. I. F. Adam, Aberdeen; Lieut. B. H. Sprague, Huron; Lieuts. S. A. Donahoe and G. E. Van Demark, Sioux Falls.

To Fort Oglethorpe, Ga.: Capt. W. J. Maytum, Alexandria; Capt. W. F. Keller and Lieut. F. I. Putnam, Sioux Falls; Capt. J. C. Chichester, Redfield; Capt. J. F. McKie, Wessington.

To Fort Riley, Kas.: Capt. E. L. Perkins and Lieut. D. W. Craig, Sioux Falls.

To Hoboken, N. J.: Lieut. W. A. Delaney, Mitchell.

To report for assignment to duty: Lieut. F. E. Townsend, Nisland.

TRANSFERS

MINNESOTA OFFICERS

Capt. J. P. Chance, International Falls, from Fort Riley, Kas., to Camp Beauregard, La.

Capt. F. G. Blake, Minneapolis, from Hoboken, N. J., to Camp Cody, N. M.

Capt. T. E. Flinn, Redwood Falls, from Fort Oglethorpe, Ga., to Camp Dix, N. J.

Lieuts. E. W. Cowers and Edward Schons, St. Paul, from Fort Riley, Kas., to Fort Oglethorpe, Ga.

Lieut. S. E. Gilkey, Watson, from Fort Riley, Kas., to Fort Oglethorpe, Ga.

Capt. H. S. Wilson, Minneapolis, from Camp Kearney, Calif., to Fort Ontario, N. Y.

Lieut. T. J. Trutna, Silver Lake, from Fort Oglethorpe, Ga., to Matuchen, N. J.

Lieut. W. J. Carson, St. Paul, from Fort Snelling, Minn., to Rockefeller Institute, N. Y.

Lieut. J. R. Wood, Hallock, from Fort Oglethorpe, Ga., to Camp Lee, Va.

Capt. H. A. Morriss, Minneapolis, from Camp Dodge, Iowa, to Fort McPherson, Ga.

Lieut. W. J. Eklund, Duluth, from Fort Riley, Kas., to Rockefeller Institute, N. Y.

Lieut. L. W. Pollock, Rochester, from New Haven, Conn., to Vancouver Barracks, Wash.

Lieut. A. M. Larson, Jasper, from Fort Sam Houston, Texas, to Camp Cody, N. M.

Lieut. T. F. Rodwell, White Earth, from Fort Snelling, Minn., to Camp Dodge, Iowa.

Capt. C. R. Ball, St. Paul, from Camp Grant, Ill., to Camp Jackson, S. C.

Major J. C. Sessions, Minneapolis, from Fort Riley, Kas., to Camp Lee, Va.

Capt. Paul E. Kenyon, Wadena, from Fort Riley, Kas., to Camp McArthur, Texas.

Lieut. Gilbert Hendrickson, Lewiston, from Fort Riley, to Camp Sherman, Ohio.

Lieut. H. I. Twiss, St. Paul, from Fort Sill, Ark., to Camp Zachary Taylor, Ky.

MONTANA OFFICERS

Lieut. A. M. MacCauley, Great Falls, from Camp Grant, Ill., to Camp Devens, Mass.

Lieut. W. S. Estabrook, Moccasin, from Army Medical School to Camp Grant, Ill.

Lieut. A. A. Pastine, from Camp Wadsworth, N. C., to Camp Colt, Pa.

Major T. C. Witherspoon and Lieut. Harold Schwartz, Butte, from Camp Dodge, Iowa, to Camp Wadsworth, N. C.

Lieut. W. B. Rogers, White Sulphur Springs, from Camp Kelley to Mt. Clemens, Mich.

Capt. C. A. Gardner, Columbus, from Fort Riley, Kas., to Fort Oglethorpe, Ga.

NORTH DAKOTA OFFICERS

Capt. J. E. Crammond, Rugby, from Fort Riley, Kas., to Camp Grant, Ill.

Capt. B. S. Nickerson, Mandan, from Camp Beauregard, La., to Camp Sevier, S. C.

Lieut. A. B. McNab, Beach, from Fort Oglethorpe, Ga., to Camp Meade, Md.

Lieut. C. R. Tompkins Oberon, from New York to Fore Oglethorpe, Ga.

SOUTH DAKOTA OFFICERS

Lieut. O. W. Tulisalo, Bellefourche, from Fort Riley, Kas., to Camp Grant, Ill.

Capt. T. W. Moffitt, Deadwood, from Fort Sill, Ark., to Camp Grant, Ill.

Capt. F. S. Kidd, Woonsocket, from Fort Riley, Kas., to Camp MacArthur, Texas.

Capt. R. M. Malster, Carter, from Fort Riley, Kas., to Camp Sherman, Ohio.

Lieut. R. A. Crawford, Chamberlain, from Fort Riley, Kas., to Camp Crane, Pa.

COMMISSIONS ACCEPTED

BY MINNESOTA PHYSICIANS

In the M. R. C.

Dr. L. W. Anderson, Atwater; Drs. G. McCreight, and W. L. Palmer, Albert Lea; Dr. H. J. Shalver, Appleton; Dr. D. M. Johnson, Buhl; Dr. C. W. Woodruff, Chatfield; Dr. W. H. Daniels, Crookston; Dr. G. T. Ayers, Ely; Dr. J. A. Gates, Kenyon; Drs. J. N. F. Elliot, J. M. Hall, M. J. Lynch, A. T. Mann, and L. G. Rowntree, Minneapolis. Dr. J. V. Johnson, Morgan Park; Dr. A. B. Stewart, Owatonna; Dr. M. W. Smith, Red Wing; Dr. M. J. Kern, St. Cloud; Dr. C. H. Johnson, Spring Valley; Dr. C. R. Ball, St. Paul; Dr. A. J. Rudolph, Waseca; Dr. C. A. Lester, Winona; Dr. E. W. Arnold, Adrian; E. O. Swanson, Brainerd; Dr. D. A. MacDonald, Minneapolis; Dr. J. M. Conroy, Sauk

Center; Dr. G. M. Holland, Spring Grove; Dr. H. McIntosh, St. Paul.

In the N. R. F.

Dr. J. W. Stuhr, Euclid; Dr. A. M. Snell, Lake Park. Drs. G. W. Kirmse, W. B. Roberts, C. G. Swenden, and C. A. Undine, Minneapolis; Dr. H. W. Sybirud, New Richland; Dr. J. F. Smersh, Owatonna; Dr. E. G. McKeown, Pipestone; Dr. A. R. Scheier, St. Paul; Dr. A. N. Collins, Duluth.

BY MONTANA PHYSICIANS

In the M. R. C.

Dr. D. R. Claiborn, Big Timber; H. A. McMillan, Dillon; Dr. T. B. Marquis, Livingston; Dr. T. W. Welsh, Roundup; Dr. E. L. Sutherland, Sheridan; Dr. C. E. Beltzer, Nashoe; Dr. J. L. Sears, Winifred; Dr. W. G. Palm, Joplin. Dr. J. E. Stuart, Livingston; Dr. J. E. D. Baird, Roundup.

In the N. R. F.

Dr. C. Worth.

BY NORTH DAKOTA PHYSICIANS

In the M. R. C.

Dr. L. Sante, Ellendale; Dr. J. B. Tyrell, Underwood; Dr. E. E. Greene, Westhope; Dr. J. A. Carter, Warwick.

In the N. R. F.

Dr. T. M. MacLachlan, Bismarck.

BY SOUTH DAKOTA PHYSICIANS

In the M. R. C.

Dr. T. J. Devereaux, Aberdeen; Dr. L. L. Parke, Canton; Dr. H. A. Gueffroy, Frankfort; Dr. F. H. Stewart, Kimball; Dr. R. B. Fleeger, Lead; Dr. B. A. Bobb, Mitchell; Dr. J. G. Chichester, Redfield; Drs. W. F. Keller, E. L. Perkins, F. I. Putnam, and G. E. Van Demark, Sioux Falls; Dr. O. Heraldson, Watertown; Dr. J. F. McKee, Wessington; Dr. E. M. Morehouse, Yankton; Dr. H. L. Crane, Lead.

OFFICE ATTENDANT WANTED

Nurse preferred, one who is qualified to give anesthetics, and do ordinary laboratory work, also x-ray work. In answering give experience and salary expected. Address, Dr. C. I. Oliver, Graceville, Minn.

OFFICE FOR RENT AND EQUIPMENT FOR SALE

Suite of four rooms. X-ray machine, etc. Will go into army. Practice of about \$6,000 per year. Town of 20,000. Address 142, care of this office.

ASSISTANT WANTED

A Scandinavian physician (draft exempt) as assistant in a large surgical and general practice; good income, with permanency for one qualified. Must be good mixer and worker. State full particulars; begin in four weeks. Address 141, care of this office.

DEATHS REPORTED TO THE STATE BOARD OF HEALTH OF MINNESOTA FOR THE MONTH OF MAY, 1918

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Ada	1,253	1,432	2												1			1
Albert Lea	4,500	6,192	1			1												
Alexandria	2,681	3,001	5													1		1
Anoka	3,769	3,972	11	1	2											1		
Austin	5,474	6,960	10		1													
Barnesville	1,326	1,353	5		1													
Benidji	2,183	5,099	9		2						1							1
Benson	1,525	1,677	0															
Blue Earth	2,900	2,319	0															
Brainerd	7,524	8,526	11	1	1	1												
Breckenridge	1,282	1,840	1															
Canby	1,100	1,528	3													1		
Cannon Falls	1,239	1,385	3		1	1												
Chaska	2,165	2,050	0															
Chatfield	1,426	1,226	3															
Cloquet	3,074	7,031	5								1					1		
Crookston	5,359	7,559	7		1													
Dawson	962	1,318	3							1								
Detroit	2,060	2,807	6					1		1	1					2		
Duluth	52,968	78,466	107	6	3	14		1			1		1		1	8	2	11
East Grand Forks	2,077	2,533	0															
Ely	3,572	3,572	3	1		1												
Eveleth	2,752	7,036	3															
Fairmont	3,440	2,958	2															
Faribault	7,868	9,001	13				1									3		1
Fergus Falls	6,072	6,887	7															
Glencoe	1,788	1,788	3			1												
Glenwood	1,116	2,161	2															
Granite Falls	1,454	1,454	1															
Hastings	3,811	3,983	9	1		1										1		
Hutchinson	2,495	2,368	3		1	1												
International Falls		1,487	7	1	1	1											1	2
Jordan	1,270	1,151	0															
Lake City	3,142	3,142	7															
Le Sueur	1,937	1,755	2													1		1
Little Falls	5,774	6,078	7															
Luverne	2,223	2,540	3		1													
Madison	1,336	1,811	1			1												
Mankato	10,559	10,365	21	2	1											3		1
Marshall	2,088	2,152	3															
Melrose	2,591	2,591	1			1												
Minneapolis	202,718	301,408	330	45	9	41	10	9	6	2	15	1	1	1	7	30	1	19
Montevideo	2,146	3,056	5													2		
Montgomery	979	1,267	1															
Moorhead	3,730	4,840	7														1	
Morris	1,934	1,685	0															
New Prague	1,228	1,554	0															
New Ulm	5,403	5,648	12	1	1											1		
Northfield	3,210	3,215	4															1
Ortonville	1,247	1,774	2			1												1
Owatonna	5,561	5,658	12		2											1		2
Pipestone	2,536	2,475	3		1						1							
Red Lake Falls	1,666	1,666	1															
Red Wing	7,525	9,048	17	1	1											1		1
Redwood Falls	1,661	1,666	3													1		
Renville	1,075	1,182	0															
Rochester	6,843	7,844	66		4	4		1			2					8		2
Rushford	1,100	1,011	2															1
St. Charles	1,304	1,159	0															
St. Cloud	8,663	10,600	21	3		2	1									2	2	1
St. James	2,102	2,102	1															
St. Paul	163,632	214,744	275	19	6	27	9	5			1		1		4	15	1	12
St. Peter	4,302	4,176	1															
Sauk Centre	2,154	2,154	0															
Shakopee	2,046	2,302	5															
Sleepy Eye	2,046	2,247	2															1
South St. Paul	2,322	4,510	6					1			1							2
Staples	1,504	2,558	0															
Stillwater	12,318	10,198	10			1										1		
Thief River Falls	1,819	3,174	13	1		1		1	1							2		1
Tower	1,111	1,111	2															
Tracy	1,911	1,826	0															
Two Harbors	3,278	4,990	10	2	1	3	1					1						
Virginia	2,962	10,473	12	2	1	1												
Wabasha	2,622	2,622	0															
Warren	1,276	1,613	0															
Waseca	3,103	3,054	0															
Waterville	1,260	1,273	1		1													
West St. Paul	1,830	2,660	3															
Willmar	3,409	4,135	5															
Winona	19,714	18,583	18	1	1	1												6
Winthrop	813	1,043	1		1													
Worthington	2,386	2,386	2								1							

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	0															
Aitkin	1,719	1,638	1			1												
Akeley			0															
Appleton	1,184	1,221	2				1											1
Belle Plaine	1,121	1,204	2							1						1		
Biwabik		1,690	3			1												
Bovey		1,377	0								1							
Browns Valley	721	1,058	1															
Buffalo	1,040	1,227	2															
Caledonia	1,175	1,372	3															
Cass Lake	546	2,011	3															
Chisholm		7,684	8	1												1		2
Coleraine		1,613	2			1												
Delano	967	1,031	0															
Farmington	733	1,024	2													1		
Fosston	864	1,055	0															
Frazee	1,000	1,645	1													1		
Grand Rapids	1,428	2,239	3			1												
Hibbing	2,481	8,832	16			1		2							1	1		2
Jackson	1,756	1,907	2			1												
Janesville	1,254	1,173	2	1														
Kenyon	1,202	1,237	1			1												
Lake Crystal	1,215	1,038	0															
Litchfield	2,280	2,333	2															
Long Prairie	1,385	1,250	0															
Madelia	1,272	1,273	1			1												
Milaca	1,204	1,102	1															
Mountain Lake	959	1,081	1															
Nashwauk		2,080	0															
North Mankato	939	1,279	1															
North St. Paul	1,110	1,404	1													1		
Osakis	917	1,013	0															
Park Rapids	1,313	1,850	1															
Pelican Rapids	1,033	1,019	0															
Perham	1,182	1,376	3													1		
Pine City	993	1,258	1															
Plainview	1,038	1,175	2															1
Preston	1,278	1,193	0															
Princeton	1,319	1,555	7			1										1		
St. Louis Park	1,325	1,743	4							1								
Sandstone	1,189	1,818	0															
Sauk Rapids	1,391	1,745	0															
South Stillwater	1,422	1,343	0															
Springfield	1,511	1,482	1															
Spring Valley	1,770	1,817	2															1
Wadena	1,520	1,820	5	2												1		
Wells	2,017	1,755	0															
West Minneapolis	2,250	3,022	3														1	
Wheaton	1,132	1,300	0															
White Bear Lake	1,288	1,505	1													1		
Windom	1,944	1,749	2															
Winnebago City	1,816	2,555	*															
Zumbrota	1,119	1,138	0															

STATE INSTITUTIONS

Anoka, Asylum	3																	
Faribault, School for Blind	0																	
Faribault, School for Deaf	0																	
Faribault, School for Feeble Minded	8	2																1
Fergus Falls, Hospital for Insane	12		2			1												
Hastings, Asylum	3																	
Minneapolis, Soldiers' Home	5															1		1
Owatonna, School for Dependents	0																	
Red Wing, State Training School	0																	
Rochester, Hospital for Insane	18	1		2													2	
Sauk Centre, Home School for Girls	0																	
St. Peter, Hospital for Insane	16	7																1
St. Cloud, State Reformatory	0																	
Stillwater, State Prison	0																	

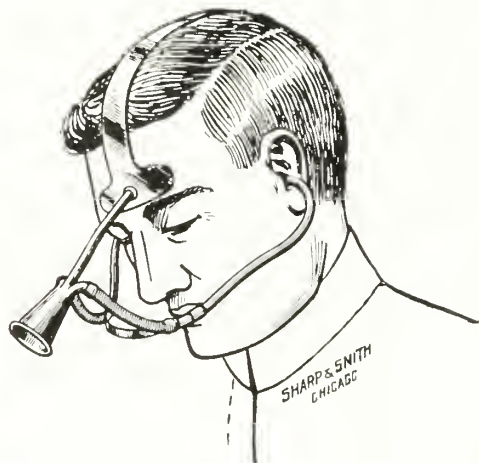
OTHER PARTS OF STATE

	866	90	20	71	8	14	7	....	17	....	1	2	16	60	3	67
Total for state	2167	194	59	193	32	33	18	4	43	1	4	5	37	158	12	146

*No report received. REGISTRAR not doing his duty
137 stillbirths not included in above totals.

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

65 East Lake St. - - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . \$5.00

We culture all specimens aerobically and anaerobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or

Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.

5 S. Wabash Ave.

ST. LOUIS, MO.

4485 Olive St.—Corner Taylor

NEW YORK, N. Y.

18 E. 41st St.

PUBLISHER'S DEPARTMENT

EFFERVESCENT SALINOS

Salinos is a saline cathartic that is freely soluble in cold water and is very palatable. It is a perfectly harmless eliminative, and has become a favorite with many medical men who have long prescribed its constituents in a less palatable form.

For samples and descriptive literature, address the Leo Shapiro Company, Minneapolis.

ASPIRIN

Until substitution is done away with in the drug-store, even until inferiority of product is no longer harmful in the drugs prescribed by a physician, the profession will stand by the manufacturer whose product is absolutely uniform in quality, and in quantity if put up in tablet or capsule upon which uniformity of dosage depends.

The Bayer tablets and capsules of Aspirin, now made in America, are absolutely reliable in the above respects, and they thus make strong appeal to the physician who demands these qualities in the drug he prescribes.

THE RIVER PINES SANATORIUM

Intensity of intelligent conviction in the mode of treatment of a disease like tuberculosis, which, fortunately, inspires its victims with hope, is more than three-fourths of the battle to be waged by any sanatorium with hope of success. Such intensity of intelligent conviction characterizes the management of the River Pines Sanatorium, located at Stevens Point, Wis. Dr. Coon, its Medical Director, knows tuberculosis and the tuberculous patient, and he approaches his work with decided convictions which long experience have made and strengthened.

The booklet of the River Pines Sanatorium sets forth his convictions and the work done at the Sanatorium, together with the facilities for carrying on such work. It is well worth having.

THOMAS HOSPITAL

The Thomas Hospital, for the treatment of tuberculosis, is an institution of which one hears nothing but praise from Minneapolis physicians best acquainted with its work and from patients who have been patrons of it.

The building is new and thoroughly modern, and its location on the high river bank overlooking a mile or more of the Mississippi river, now known as the De Soto Harbor, is simply superb.

Its management is worthy of the highest praise, and its prices are exceedingly moderate.

It is located at 24th Avenue and 6th Street, Minneapolis, and anyone interested in the care and treatment of a tuberculous patient will do well to visit it, or to correspond with Miss Emma Odejord, R. N., Supt.

HAY FEVER

The season for hay fever is now at hand, and unhappy is the victim who cannot change his location in order to overcome the agonies of the long attacks of this malady. The physician who does not use the bacterial vaccines, which are surely growing in effi-

ciency from year to year, is not doing either himself or his patients justice.

These bacterins have given great relief or cure in so large a number of cases that their repeated trial is not only justified but demanded.

Dr. G. H. Sherman, of Detroit, Mich., the well-known manufacturer of bacterial vaccines, is an ardent advocate of the use of hay-fever vaccine, and he will be glad to correspond with any physician seeking information upon the present status of the vaccine for hay fever.

NATIONAL PATHOLOGICAL LABORATORIES

The public pathological laboratory grew out of a necessity made by a great advance in medicine, an advance that was universally recognized. However much one may exalt clinical diagnosis, he must depend upon the laboratory in much of his work, almost in his daily work; and, fortunately, very little of such laboratory work needs to be done by the general practitioner in his own laboratory. The public laboratory does the work cheaper and better than it can be done by any individual with only a moderate practice.

The National Pathological Laboratories of Chicago, St. Louis, and New York have an unexcelled staff, and they do their work at moderate and standard prices. The physician who is not a constant patron of a public laboratory will do well to correspond with this laboratory. Address 5 S. Walnut Ave., Chicago.

MELLIN'S FOOD

An undue prejudice arose against artificial infant foods some years ago when many of these foods were wholly unscientifically compounded and were ignorantly prescribed by physicians, who often said to mothers, "Use all of them until you find the right one for your baby." Of course, the result was generally just as bad as comes from feeding all kinds of food to babies at all ages.

But science has come to the rescue of the profession and the mothers of babes who cannot be brought through the nursing period on mother's milk, and are compelled to resort to other products, whether slight modifications of raw milk or a compound of the laboratory, which gives raw cow's milk its proper place; and all foods are judged upon their real food values.

Mellin's Food is a product of science, and its manufacturers have always consulted the experts in infant-feeding and have also kept close to the general practitioner, whose experience is indispensable to the laboratory man. The physician who feels himself baffled by a certain class of cases will often find relief in a study of the formula of Mellin's food.

This food finds an unquestioned place in the dietary of convalescents.

ALKALOL

It is only natural that busy physicians should have neither the time nor the inclination to consider minutely the claims made for what are generally referred to as "antiseptic solutions," in consequence of which one is apt to employ that preparation which comes first to mind without giving much attention to the question as to whether or not such a preparation is particularly indicated in the individual case.

Alkalol is said to help the cell to help itself, which means that on account of its hypotonicity, it reverses

the osmotic current, instead of provoking a discharge of secretion of cells which depletes the latter, it supplies and passes into the cell necessary salts which enable the cells to recover a normal functional tone and re-establish the physiological integrity of their secretion.

Alkalol is especially useful in those inflammations of the skin or mucous membranes that result from hot weather conditions, sunburn, dust infection, conjunctivitis, rhinitis coryza, tonsillitis, prickly heat, insect bites, poison ivy, etc.

The literature regarding Alkalol is interesting and well worth reading, and it will be sent to any physician on request.

WAPPLER RÖNTGEN RAY MACHINES

The Wappler Electric Company of New York City offers the medical and dental professions of the Northwest through their agents, Messrs. Noyes Bros. & Cutler, of St. Paul and Minneapolis, a number of models of Röntgen-ray apparatus from which the physician especially can find his needs met exactly without waste in first cost or cost of maintenance.

An x-ray machine perfectly adapted to the needs of an office, producing with precision just the results one is seeking, is always a delight. For instance, the King Model No. 2 machine, made by the Wappler Company, is a machine designed for the small hospital or the general practitioner, and it will do the whole range of work of either in a well-nigh perfect manner in, for instance, gastro-abdominal and kidney work or fluoroscopic examinations, so perfect and simple are the adjustments that control the machine's use in various lines of work.

The Wappler line is complete and consistent, offering the best available means of attaining just the results desired by workers in all lines from smallest to largest requirements—just the right machine for each, and is always dependable.

These models meet the needs of the expert röntgenologist, of the specialist in diseases that yield to x-ray treatment, and of the general practitioner whose work in this line is more limited.

Messrs. Noyes Bros. & Cutler will be glad to exhibit this apparatus to anyone interested; and, of course, their guarantee as to the quality of any outfit furnished by them, is never questioned.

INTENSIVE TREATMENT FOR TUBERCULOSIS AND CHRONIC DISEASES OF METABOLISM

Dr. J. E. Crewe, of Rochester, Minnesota, is doing a work in the intensive treatment of tuberculosis and chronic diseases of metabolism that deserves wide attention, particularly under the conditions that confront us today. Dr. Crewe has contributed two really notable papers to our columns setting forth in an unexaggerated way results obtained by him that are indeed surprising.

His first paper was entitled "An Intensive Method of Treating Tuberculosis," and appeared in our issue of December 1, 1917. In this paper he reported 136 cases of tuberculosis, arteriosclerosis, diseases of the nervous system, nephritis, chronic rheumatism, etc.

His second paper appeared in our issue of July 15, 1918, and was entitled "An Intensive Method of Treating Tuberculosis." In this paper he reported 36 cases, covering all stages of the disease, with results expressed in unmistakable terms of improvement.

These papers were read before the Staff of the Mayo Clinic at Rochester, which, to say the least, suggests that his treatment of the subject was scientific, not merely enthusiastic, in character. These papers can now be obtained from Dr. Crewe in reprint form.

Dr. Crewe maintains two sanatoria in Rochester, one for the treatment of tuberculosis cases, and one for the treatment of cases of chronic diseases of metabolism. Although the intensive treatment in the two classes of patients may be somewhat similar, the wisdom of treating each class in a sanitarium devoted exclusively to such cases, is apparent.

We believe there is no general practitioner in America, or no specialist in these diseases, who will not find Dr. Crewe's work of interest and profit.

For copies of the reprints of the articles named above, address a letter or postal-card to Dr. J. E. Crewe, Rochester, Minn.

MUDBADEN—

ESTABLISHED 1901

A Medical Institution especially adapted for the treatment and management of the various forms of Arthritis, Neuralgia, Neuritis and allied diseases

New Building : New Management : Approved Methods

A. L. JOHNSON, MANAGER

FRANK W. MACKOY, M. D., MEDICAL DIRECTOR

POST-OFFICE
JORDAN, MINN.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, SEPTEMBER 1, 1918

No. 17

PRESIDENT'S ADDRESS BEFORE THE NORTH DAKOTA STATE MEDICAL ASSOCIATION*

By G. M. WILLIAMSON, M. D., L. R. C. P. and S.
(Edin.)

GRAND FORKS, NORTH DAKOTA

To the Members of the North Dakota Medical Association:

Gentlemen:

When I was elected to the presidency of the Association a year ago I fully appreciated the signal honor the profession of the state bestowed upon me; and my sincerest thanks are again extended to you for the honor. I accepted the office fully realizing the importance of the same, and knowing full well that the duties involved are onerous and require attention and thought. I have endeavored to the best of my ability to serve you well, but it is not for me to judge with what measure of success.

Our nation had just entered the great war when I took up the duties of this office, and I wish to call your attention, briefly, to a few things that have been accomplished in the organization of the medical profession for this gigantic world struggle since that time.

It has been well said that the outstanding feature of our first year in the war has been the transformation of America's young and able manhood into an army that today numbers more than 125,000 officers and 1,500,000 enlisted men, whereas at the beginning of the war the total strength of the uniformed force was but 9,524 officers and 202,510 enlisted men. The declaration of war made it imperative that the young

men of this country with all its resources must be organized for military effectiveness. The machinery for this purpose had to be manufactured and put into operation. The lessons learned during the Civil War furnished our only experience.

The ingenuity displayed in formulating the selective draft, though this draft was far from perfect in the beginning, was truly marvelous. Formulated as it was, there seemed work for everybody, and that portion assigned to the medical profession of selecting the physically fit and classifying the defectives was of no mean proportion. When President Wilson asked the doctors of the nation to identify themselves with the draft and medical advisory boards that were to be constituted throughout the country for the purpose of making a systematic physical examination of registrants, he received an enthusiastic response. The work was cheerfully undertaken, and is now going on systematically, and will continue to the end. The physicians of America are willing to give their time and energy to this important work without remuneration or hope of financial reward. At the present time there are more than 24,000 physicians engaged in this work alone.

The task of mobilizing the medical profession has been a gigantic one. Previous to the declaration of war there had been created, as a part of the Council of National Defense, a committee of

*Read at the 31st annual meeting of the North Dakota State Medical Association, at Fargo, June 19 and 20, 1918.

American Physicians for Medical Preparedness. This committee undertook the responsible duty of formulating plans whereby the civilian medical resources of the United States might be ascertained and co-ordinated for such purposes as required by the Federal Government, so that when war was declared this work was partly accomplished.

A call was made for men to enlist in the Medical Officers Reserve Corps, and it met a ready response. That corps has grown from nothing to upwards of 18,000 at the present time. As the National Army continues to grow, this corps must keep pace. In the beginning, enlistments came fast, but as time passes the civilian population begins to inquire where and how they are to obtain medical assistance in time of need, and this is one of the problems that confronts our profession at the present time.

It has been said that this great war will be won by the medical profession. Perhaps this is true. As medical men we feel that a great responsibility rests upon us, and no sacrifice is too great for any of us to make.

There are about 145,000 medical men in the United States. Before our national army reaches the proportions that are planned, from 25,000 to 30,000 doctors must be enlisted in the Medical Officers Reserve Corps. While I do not anticipate for a moment that there will be the least difficulty in obtaining that number, the problem is, how can these men who offer their services be selected so that the civilian population will not suffer thereby?

At present there is in each state a State Committee of the Medical Section of the Council of National Defense, whose duty is to ascertain where the additional men needed can best be obtained without causing the civilian population to suffer. From the 650 physicians licensed in this state we have already furnished 130. In the last call for 5,000 additional officers by the army North Dakota is asked to furnish 50. I am sure they will be easily obtained. The problem confronting your State Committee is, who shall accept and who must be asked to stay at home for the present? While we realize that the needs of our civilian population are great, our boys at the front must not be neglected. Never in the history of wars has such dependence been placed on the medical profession as at this time.

In his address before the Clinical Congress of Surgeons of America in October, 1917, Secretary Daniels of the Navy said that it was to the

physicians that the nation turned in time of war with supreme confidence in the belief that by preventive measures they could save many lives of the youths who are willing to rally to the standard; and he wished to express the thanks of America to the men who were making the great sacrifice of devoting their time and skill to this purpose.

In America and Europe the best traditions of the medical profession have been worthily sustained, and never have the efforts of its members been more fruitful and beneficial. Terrible as is the toll of wounded by shot and shell, preventive medicine has secured the armies from the scourge of typhoid and dysentery, and has checked the ravages of typhus and tetanus, which make so dark a record in the history of all previous wars; and besides, modern surgery has saved the lives and limbs of thousands who but a few years ago under the same conditions would have been hopelessly doomed. When the history of this great war is written, the part played by scientific medicine will have a prominent place alongside the other agencies that won the world for Democracy.

Among the things I hoped to accomplish during the past year was to increase the membership of the Association materially. The Secretary's report will tell whether anything has been accomplished in this direction. If the numbers brought in do not appear to be great, it is no lack of effort on my part. I hope my efforts in that line have not been in vain, and I trust that good seed has been planted, and that my successor in office will reap some of the harvest.

During the early part of my term I had prepared a circular letter. A number of these were sent to every Secretary of a component society with the request that he send a copy to every man practicing in his district. In that letter I made this statement: "Our country is calling for volunteers for the army medical corps. The demand is great at present, and before this time next year it will be greater. It is the patriotic duty of every physician in the state to let it be known where he can be found when his country needs him. This condition makes it doubly imperative that all should be in the ranks of the State Association." At the same time I requested each Secretary to furnish me with a list of all non-members in his district, and as soon as the Secretary reported—I am sorry to say that all did not report—I sent to each non-member a personal letter with a blank application in-

closed urging him to join with us. In order to make this drive for membership more effectual I sent a special letter to each Councilor asking him to assist the secretaries in this work, and also to report the condition of affairs in his district, and I am indeed sorry to say that but one Councilor, Dr. Charles MacLachlan, of the Tri-County District, responded to this request. I shall have something more to say about Councilors later.

Now, while the result of my campaign is not all that I desired or hoped for, I hope I have paved the way for better things next year. The indifference and apathy displayed by many members of the profession throughout the state regarding medical affairs generally is almost inconceivable. In my capacity as secretary of the State Board of Medical Examiners I am, of necessity, brought in touch with men in different parts of the state, and I find that where interest in the local society is lacking and where most men are not members of any medical society, jealousies, bickerings, and petty quarrels exist among the profession, with a general disrespect and lack of appreciation by the public for things medical. In all such districts the irregulars and traveling quacks flourish.

In my letter to non-members I asked if they could give any reason why they should not join their local society. I received but one letter of explanation. I presume all the others had none. And just here I wish to call the attention of non-members to the difficulty they will encounter should they wish to remove from this to some state with which we have exchange of licenses by reciprocity. A rule of practically all state boards is that the applicant must be a member of his local society in his county or district to receive a reciprocal license. If a man is not a member, suspicion is immediately aroused that he is unworthy, and his application is not accepted.

I am of the opinion that the public does not look with approval upon the men of any profession who do not take an active interest in the scientific meetings of their profession; and the doctor who sits at home quietly while his neighboring practitioner is attending scientific meetings is surely slipping backward and his people are losing confidence in him. It requires study and perseverance to keep abreast the advance in scientific medicine these days.

As to the indifference I found among the Councilors of this Association I wish to say a word. The constitution under which our Asso-

ciation is supposed to be working, provides for a Council, and defines its duties. Section 2, Chapter 7, reads: "Each Councilor shall be an organizer, peacemaker, and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members." How many of our Councilors have performed that duty? Or, I might ask, how many know that they should do as above stated? Now, I do not wish to appear in the role of too severe a censor, but I will say that I think it decidedly wrong for any member of this Association to accept an office, Councilor or otherwise, and not be interested enough to learn the duties of the office and to perform them to the best of his ability.

It is impossible for our President and Secretary for the time being to perfect the organization of the profession of this state without assistance. We should be perfectly organized in every district and as a profession make our influence count whenever occasion demands. I would urge the House of Delegates to take heed when selecting members of the Council, and would have them elect men who are alive to the needs of the profession. I might also hint to hold-over Councilors that it is an opportune time at this meeting to hand in their resignations, if they do not care and do not intend to perform the duties of the office, and thus save my successor the necessity of administering a more severe rebuke next year.

There are a number of our members who have been regular attendants, necessarily absent from this meeting on account of serving in the Medical Reserve Corps. Some of these members are officers of the Association. In a communication to the secretaries of the component societies I recommended that all members of each local society who were in the service of our country be kept in good standing until their return to civil practice. I believe all the local societies have acted favorably on this suggestion. I would recommend to the House of Delegates that some action be taken regarding such members. That they be kept on the records of the State Association as members in good standing without payment of dues until their return, and also if any officer of this Association is absent on account of being in active service, he should not lose his right of promotion on account of such absence.

I have not been able to find any constitution or by-laws that have been officially adopted by this Association, although a few years back I remember that a committee was appointed for the purpose of preparing a constitution and by-laws. I would recommend that the House of Delegates inquire into this matter, and that a committee on revision of the constitution and by-laws be appointed to act in this matter, and have a constitution and by-laws for the North Dakota Medical Association properly prepared and adopted. I would further recommend that our list of officers be changed so that instead of electing a first, second, and third vice-president, we elect a first and second vice-president, and a president-elect.

The election of a president a year before his year of service begins gives him an opportunity to get in touch with the affairs of the profession throughout the state before he begins the active duties of his office. He could thus prepare and read a message to the Association on assuming office and outline the work of the ensuing year. Then the members would know from the beginning the policy of their president, and the things he expects to accomplish during his term of office.

Our meeting is being held more than a month later this year than on previous occasions, because as this is an age of automobile travel, the uncertain condition of the roads during the early part of May was sufficient reason for the committee in charge to make the change. I would suggest that the date of future meetings be considered, and a time selected when we could be reasonably sure that weather conditions would not interfere with automobile travel, thus giving our members a better opportunity to attend the meetings.

This is the thirty-first annual meeting of the North Dakota Medical Association. Few, if any, men who were at the birth of the Association are present today, and this suggests that attention be called to the importance of having the early history of medicine in this state written before men who were active in the early days and know the history have passed away. I have talked about this with some of the pioneers of medicine in the state and I hope that definite steps will be taken at this meeting to have this very important matter settled. I want to see an active committee appointed to have charge of this, and to my successor in office I would say that no more important work can be accomplished during his term of office, or one that will en-

dear him to the profession more than that of having the work of the sturdy pioneers of medicine in North Dakota properly recorded.

I have never been an enthusiastic supporter of Medical Defense of this Association. And in view of the fact that so many of our members are not in civil practice, it necessarily follows that we lost their pro-rata fee in support of that feature. As the income of the Association will be lessened thereby, I ask that the House of Delegates carefully consider this matter. It seems to me that it will be necessary to increase the dues or to abandon the Medical Defense entirely. I am in favor of giving up the Medical Defense.

I have spoken of some features of the work the North Dakota State Committee of the Medical Section of the Council of National Defense is carrying out. This committee has no funds or appropriations from any source to defray expenses. The members pay their own traveling and hotel bills, and contribute individually in order to defray such expense as postage, stationery, etc. I would ask our Councilors to inquire into the needs of this committee, and, if possible, donate from the treasury of this Association what they think we can afford in order to pay some of the necessary expense of the committee. I am sure such action would meet the approval of the entire membership.

Before closing I wish to thank all those who have assisted me in carrying on the affairs of the Association during the past year. It has always been a pleasure for me to assist in carrying on the work of this Association. I hope in the years to come that I may be able to continue to work for the best interest of the profession in our state. To our members who are serving in the army, many of whom are my personal friends, we wish a safe return. We know that where they are sent the honor of the profession will be upheld. None of them will fail to do his duty under any circumstances. We who are forced to remain at home envy them their good fortune of being able to be in active service for our country. But to us who are less fortunate there are duties perhaps of a more ordinary nature, but none the less important to be performed. These common duties performed with common sense and uncommon enthusiasm contribute the highest service most of us can render our country in her hour of need. Sacrifice and service are the bone and sinew of patriotism. It is a sacrifice for many of us to stay at home and perform the duties at hand, but we may be thereby rendering a larger service.

TRANSPORTATION OF THE WOUNDED*

By HENRY J. JUMP, M. D.

Major, M. R. C.

WASHINGTON, D. C.

In the early times of war, surgeons remained far back of the line and outside of the range of guns. The wounded were brought to them as occasion permitted, and many were left on the field of battle for civilians to care for.

There has been gradual progress in the care of the wounded until the very elaborate plan of this and other governments has been developed. In the Napoleonic wars the first advance was made. Barons Larrey and Percy originated the light, horse-drawn ambulances and litter-bearers, which were used for the first time in the campaign against Austria. These were such a distinct improvement on the old methods that they excited much favorable comment. In our own Civil War the wounded were carried back to the hospitals by their own fellow soldiers. It is said that this service was used by many as an excuse for them to stay out of the line.

Our object today is to remove wounded men from the line of battle just as soon as possible. They must not be allowed to interfere with the operation of troops, and they must have treatment just as early as possible. It is an established fact that the earlier the treatment the earlier the recovery; and the sooner, therefore, can the wounded return to the firing-line. In the English and French armies today proper and complete treatment is done within eight hours, if possible; and, at the outside, not more than twenty-four hours must elapse before the wound is cleaned, drained, and dressed. Experience has shown that this is necessary to prevent grave infections.

In the care of the wounded the man himself must not be lost sight of; and whatever is done must take into consideration his ultimate recovery. As one British surgeon said, so much effort had been expended at times to saving an extremity that the man's vitality was so lowered that his life was lost.

The wounded cannot be carried far without rest and nourishment. They, as a rule, are so fatigued by the long watches in the trenches that when their wounds are dressed they fall into a heavy sleep from which it is hard to arouse them. So resentful are they of disturbance that

it seems cruel to awaken them, and many have said they would rather die than be moved. It is necessary, therefore, to give the wounded man expert care early, and put him into a bed in which he may lie. Further it has been learned that early removal after operation is often fatal because of shock and hemorrhage.

Ellers studied the important question as to whether it is best to immediately operate upon cranial wounds in the advanced hospitals or to send them unoperated on to the base. His conclusion was that transportation within the first five days after operation means certain death, while the percentage of deaths falls gradually if transportation is delayed for four or five weeks. The same may be said of the abdominal and chest cases, but to a lesser degree. It is necessary, therefore, to get the serious cases back to the evacuation or base hospital quickly, where they may be put to bed, for you are confronted with serious infection if the wound is not cared for early. The Orthopedic Section of the Surgeon-General's office advises that a fixing dressing be put on, and the man moved back to the base quickly without changing the dressing until he is permanently located.

So with these problems the necessity of evacuating the wounded from the zone, of early treatment, of early confinement to bed, and prevention of congestion in the hospitals, our scheme of hospitals has been developed.

In this scheme you will see, on the slides, which I will show you later, the regimental surgeons are up at the line with their own regiments. They really form a part of the Army, living, eating, sleeping with their own men. They attend the wounded, and are with them constantly. They work in their own dugouts or whatever bit of shelter they may get within one hundred or two hundred yards of the advance trenches. They advance and retreat with the troops. They apply first-aid dressings. The litter-bearers of the Ambulance Corps work here with them, dividing the dead from the living and moving into the dressing stations those who have been cared for and those whom the regimental surgeons cannot care for. These Ambulance Corps are divided into four divisions,—the bearer section, the transporting section, the dressing section, and the supply section. They are, as many of you know,

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

composed of the finest young college men in our land, who have volunteered for this work among the very first. It would seem that the whole burden of the transportation of the wounded lies upon their shoulders. They carry the men on litters, always out of step to avoid jarring. In many instances they have to transport them individually or in pairs without litters. At the battle of Arras many wounded were transported down the river to the hospitals in pontoon boats drawn by the litter-bearers.

At the dressing-stations four surgeons of the Ambulance Corps are usually on duty, and during times of action others may be called on from those held in reserve. Hot food is given to the men there, and, if they may be kept without danger until night, they are not sent through in the ambulances until then. Only necessary surgery is done here. Sometimes, but not often, the emergency demands that major surgery be done here. Tetanus antitoxin is given here. These dressing-stations have to keep near to the firing-line, and are therefore very mobile. If the distance be great the wounded are collected at favorable points, and the ambulances sent in for them. The endeavor, however, is to keep them near enough for the litter-bearers to walk in.

In connection with the dressing stations and in the general neighborhood will be the aid station for slightly wounded, who may reach it unassisted. The roads to this must be plainly marked, for the men go there from all points of the line.

From the dressing-station the wounded are moved back by ambulances to the Field hospitals by the transporting section. It is aimed to do this at night because it is safer, but it has to be done often in the daytime and the ambulance driver must seek favorable times as regards gunfire. The Field hospital is a large tent, which may be rushed down to a point and put up quickly. The record for setting up a Field hospital is that of Colonel Reno's men, who had the hospital ready for service 45 minutes after arrival. They must be located on roads because of the difficulties of communication. They are meant to be more permanent than the advanced points, and they may be moved forward or to the rear to keep their relative position with the line. In many cases these hospitals cannot stay, for they would be shot to pieces unless protected by a hill or some other conformation of the land.

From the Field hospitals ambulances carry the men back to the Evacuation hospital, which is located on the railroad or water communications.

In this way transportation of men to the base is quickly accomplished. Ambulances in this territory are under the control of the Evacuation hospital. They usually go through singly, for such can break through the line of troops without stopping them. On the road, right-of-way must be given to re-inforcing troops, ammunition wagons, and supplies, in the order given. The wounded man is the wastage of war. Troops, ammunition, and supplies are necessary for the activities of the firing-line. This seems a bit heartless, but it must be recollected that the object of the battle is victory, and nothing must be allowed to interfere with the activities of troops.

Casualty clearing station: To the Evacuation hospital lately teams of men are sent from the base so that those cases needing major surgery may be given the best that is available. It is usually located just outside the range (8 miles) of the 5.9 guns.

In a letter recently read from Dr. Wolsey of New York, who is with Major Brewster's unit, it was stated that those two had been sent up as a team to a certain Evacuation hospital. In the line of stretchers was found young Osler, Sir William's son. Fortunately, several of our noted surgeons were there, and almost immediately it became the privilege of Brewster, Crile, Cushing, and others to minister to the young man, but in spite of all they did he died. It must have been a satisfaction to his father to know that his boy was cared for by these old friends of his, and he had the best we had to offer.

But the Evacuation hospital, like the others, must be kept clear to make room for others coming in. From this point back transportation is accomplished by hospital trains and hospital boats. It is said that our own hospital trains, equipped with dispensary, operating-room, place for patients to sit and to recline, quarters for its own staff, kitchen, etc., are the best in the world. Whether they will be sent to the other side we do not know.

For the daily casualties the ordinary equipment is sufficient, but before an action provision must be made to take care of hundreds or thousands of patients. Litters, ambulances, and supplies must be accumulated; ambulances must be marked as to the number of sitting and reclining patients they can take care of; the roads must be known; and direction of travel for troops into the trenches must be known, for the wounded must be carried with the current instead of

against it. Telephonic communication keeps the Evacuation hospital informed of how many are coming out. When a man is placed on a litter he stays on it until he is put to bed. It is necessary, therefore, to have many in reserve for the litter-bearers to pick up and get back into the fray.

Roads are often torn up, and detours become necessary. This opens up many dangers, for the terrain is badly disturbed with shell craters, etc. If an ambulance gets off the road it frequently must be abandoned. Horses must be shot, for the mire is so thick that it is impossible to get them out. Men who fall into the shell craters with their packs on cannot get out unaided, and thousands have been drowned in this way.

The Base hospital, toward which all are moving, is more or less permanent, and is located well back of the zone of advance, but within the

line of communication. Associated with them are the "mobile units," who are ready to rush up to the aid of the Evacuation hospitals when expansion is necessary. They go with their whole equipment of surgeons, nurses, and other personnel.

The Base hospital is prepared to take care of 500 sick. After an action they have been compelled to take care of fifteen or eighteen hundred. In connection with the Base hospital we purpose to construct a Fracture hospital of 1,000 beds and an Orthopedic hospital of 2,500 beds, with a shop serving both between them. As over 30 per cent of the injured are orthopedic cases, their value is readily seen. In these hospitals it is proposed to begin reconstruction work almost at once after injury. We shall not wait for joints to stiffen, but shall begin to mobilize them at once.

INFANT MORTALITY*

By F. C. RODDA, M. D.

MINNEAPOLIS

I understood from your Secretary, Dr. Alway, that this meeting of the South Dakota State Medical Association was to be *preeminently patriotic*. In conforming to the spirit of the occasion I have chosen the subject of infant mortality. At present, to interest one's self in this matter and to endeavor to reduce our infant mortality, is an expression of the highest type of patriotism.

The moral right of an infant to life and protection has made but little impression on the minds of men in all time; in fact, the infant has been left to its fate, or, worse still, has been further handicapped by ignorant or misdirected care, a demonstration of the theory of the survival of the fittest. Many still deem it a sacrilege to interfere with Divine Providence. This theory of discarding the weak comes down from Spartan days, when a committee passed judgment on the infant. If it appeared rugged and, especially, if it were a male, it was carefully nurtured. If the reverse obtained, it was abandoned in the forest or in caverns.

In Roman times the same callousness persisted, though there the father was judge. At birth

the child was placed on the floor. If the father chose to preserve his offspring he picked the child up in his arms, from which act comes our expression "raising a child."¹ If he chose not to raise the child it was abandoned in the forest or otherwise disposed of. Some of these children were rescued—at times to be purposely maimed and later exploited as beggars.

One would think Christianity would have changed the attitude of men, but its influence is little apparent. The infant in the first thousand years of the Christian era had a hapless lot. In the 12th century we read that infants received but scant consideration and that infanticide was very common. So many bodies of little ones were recovered by fishermen in their nets, drawn from the Tiber, that the pope was constrained to issue an edict against the practice.

Nor did time improve conditions. Although infanticide was no longer tolerated, the mortality remained enormous. Queen Anne, dying, in 1714, at the age of 49, was survived by no children though she had given birth to eighteen or nineteen—all died in infancy except one, which reached the age of eleven years. If these conditions obtained in royal circles, what was the lot of the poor? A French writer at the end of the 18th century stated that more than one-

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

half of the children born died before reaching the age of two years.

In 1880 the infant death-rate in New York was 288 per 1,000. Our infant mortality rate is still shamefully high, and still materialism supersedes humanitarian considerations. In spite of an estimated yearly infant mortality of 300,000 in the United States, Congress in 1917 appropriated three millions of dollars to combat foot and mouth disease in cattle and hog cholera (that is, to reduce cattle and hog mortality), and only three hundred thousand for the Children's Bureau, established to reduce infant mortality.

To France belongs the credit of first taking cognizance of conditions, but less for moral reasons than from military necessity. About the middle of the last century she noted with alarm her rapidly falling birth-rate and a mounting infant mortality rate, while across the Rhine her aggressive neighbor, with a very high birth-rate, was rapidly outstripping her in population. As a military measure she opened her consultations for nurslings, and began a campaign of infant welfare work. Not until infant mortality is presented in terms of dollars and cents or of material necessity can a change of attitude be hoped for. However, this world war promises to change, quicken, and energize the issue.

What is the effect of the war on our problem? From France we get the most vivid pictures. Struck by a mighty military blow for which she was not prepared, she bent every energy in sheer self-preservation. In the fight for life every available man and woman was put to military uses. Civil life was neglected, and, with it, all considerations of the infant. What were the results? Her birth-rate dropped from 18 per thousand (then the lowest of any country) in 1913 to about 8 per thousand in 1916, which represented a decrease in births of 405,294. At the same time her infant mortality rate rose by leaps and bounds. When we add to these losses the deaths in military and civil life, we find a decrease in population of 2,000,000 in the two years 1916 and 1917. With a population of about forty million in 1914 you can readily figure how short a time it would take to depopulate France. And even with a speedy termination of the war you can realize how bitter will be the struggle for reconstruction and the restoration of her population.

France in her present extremity can do but little to improve conditions. It is to the credit of our great American Red Cross that it has

recognized the situation, and is doing what it can to alleviate the deplorable conditions. Work organized and directed by our American pediatricists, such as Lucas, Sedgwick, Knox, and Pearce, has accomplished a considerable measure of relief, and is doing much to hearten France in her struggle.

England had much the same problem in 1914, and for a time she was on the highway to disaster. But she profited by the experience of France, and, though it was impossible to raise the birth-rate, she has made every effort to reduce the mortality among her infants, with the result that it has fallen from 110 per thousand in 1915 to 91 in 1916, a saving of 19 per thousand births, and that while in the midst of this terrible war. This leads to an interesting speculation made by Dr. S. M. Hamill, that "if England during the last forty years had maintained the birth-rate existing at the beginning of this period, and had kept down the infant death rate to that obtained in 1916, she would have today three million more men between the ages of 18 and 40 years,—a force preponderant enough to have won the war before this."² We may further speculate in this wise: Less than a century ago the population of France equalled Germany's. In 1914 their respective populations were 40 millions and 80 millions, or 1 to 2. If France had maintained an average birth and death rate her population might have equalled Germany's in 1914. This true, we would not have our world war. Though this may not fulfill all the requirements of a correct hypothesis, it at least gives us an illustration of the importance of the loss of babies.

And now we are in the war, to be called upon to do more than we even now realize. How shall we be affected? We are already planning on an army of 5,000,000 and note, largely men from 21 to 31 years old, which is the marriageable age. Our birth-rate will be profoundly reduced, and there will be a higher mortality-rate, due to disarrangement of social life. We, too, will have our casualty lists from the battle-field, and our returned soldiers maimed and incapacitated.

We are concerned, however, for the present, with the infant mortality rate. It is estimated (please note the word "estimate") that our infant mortality rate is about 300,000 per year. That is, during the decade 1900 to 1910 this amounted to 2,500,000.³ A conception of these figures may better be obtained if we imagine

the city of Chicago wiped out, without saving a single life, every ten years; or the depopulation of the entire state of Minnesota, or a loss of four times the population of the state of South Dakota. And that is not all. These figures do not cover the loss of scores of thousands of preventable still-births each year. Further, for every child dying, four are ill, with attendant trials and monetary waste. We still have remaining for consideration the fact that many who are ill never make complete recovery. They survive, but they are handicapped. Our experience of the high percentage of unfit among drafted men is a sad commentary on our present status.

You may say, "Yes, this is terrible; it is true, but it is Divine Providence, and not in our control." That is not true. It is largely the result of dense ignorance and gross neglect. Scores of small localities, by intensive work, have reduced the mortality-rate more than half. You say again, "These are selected communities, and results are not trustworthy for the entire country." The achievement of New Zealand is an answer to the argument⁴ and a proof that at least one-half of the infant mortality is preventable. With an area of 104,000 square miles and a population of 1,071,000,*including rural and city life, under varying climatic conditions, she has lowered her infant mortality rate from 80 per 1,000 in 1907 to 38 in 1913, or over 50 per cent. What New Zealand has done we can do. The New York Department of Health has adopted this legend: "Public Health is purchasable; within natural limitations a community can determine its own death-rate."

Here is our problem:

To save at least 150,000 infants' lives each year. Incidentally, this campaign will prevent a large percentage of the number of still-births, and reduce an enormous morbidity, besides raising the general standard of health.⁵

How shall we approach the problem? Let me discuss this under four headings:

1. In giving statistics above I was forced to use the term "estimate." We have no accurate statistics for the entire country.⁶ We are in a class with China. In only the New England states, Pennsylvania, and Michigan have we accurate statistics of births and deaths, or for only 31 per cent of our population. We know, fairly accurately, how many cattle and hogs there are in the country, and we can predict the wheat crop to a nicety, but as to the baby crop, it is

all a venture—no national bookkeeping of our most important asset. Think of the Standard Oil Company running its business without books or records. We sense an evil in our loss of babies, but we do not know how great it is nor how to remedy it. And note, please, South Dakota is in the list of backward states whose vital statistics are most inadequate. We must have a record of births, and a record of deaths with their causes. It is a matter of common decency and patriotism that every doctor in this state should endeavor to have legislative provision for this, and should conscientiously live up to the requirements of those laws when once they are passed. Such vital statistics will then be a real barometer of infant mortality.

2. Diffusion of knowledge and publicity is one of the first steps in the work. There is established in the Department of Labor at Washington a Children's Bureau, which is very active in this direction. For the asking, one may obtain bulletins and pamphlets bearing on all phases of the work. These should be in the hands of all individuals interested.

We also have a National Association for the Study and Prevention of Infant-Mortality. Every doctor in this state should be a member. The annual fee is a nominal one of three dollars. Influential lay people and women's clubs and churches should join. Members receive the annual report of the society, which, Dr. Holt states, "constitutes the most valuable year-book on infant-welfare work." I wish I could prevail upon this association, at this time, to organize a state-wide membership campaign for this association. We are now launching such a campaign in Minnesota. If the people of this state could be informed how great the loss of infant life is, how important it is to prevent it, and what great results can be obtained by a little effort, I am sure a wave of enthusiasm would sweep over your state.

3. Enthusiasm must be capitalized,—action must be taken. The physician should be the leader. He must establish infant-welfare clinics, baby-week campaigns. He must also stir up interest in prenatal care, breast-feeding, pure milk, and other allied subjects which are included in the general work to prevent infant-mortality. Many will plead lack of time. Their alternative is to interest some philanthropic individual, the woman's club, or the kindly neighbor. Such was the method employed by Dr. Truby King when he instituted the work in New

Zealand.⁷ He interested Lord and Lady Plunket, whose money, work, and sympathy were largely instrumental in obtaining such grand results. In recognition of this the nurses are known as Plunket nurses. Who knows—there may be potential Plunkets in South Dakota, styled "Mr. and Mrs." rather than "Lord and Lady."

The Children's Bureau at Washington is ready to furnish you ideas and send pamphlets dealing with every phase of the work, such as the necessary committees to be appointed, the probable cost, how to obtain exhibits, etc.

4. All these efforts by private agencies, clubs, towns, and municipalities should have for their goal the production of a strong enough public sentiment to compel the State to take over the work. The State looks after its horses, cattle, and hogs—why not interest itself in the babies? We are now endeavoring to do this in Minnesota, and Massachusetts already has such a scheme in force. It appears, to the best of our knowledge, that all this work should be controlled and co-ordinated by the State Board of Health. When thus organized, with the county as a unit, surveys may be made, and paid public workers and nurses may be employed. It is

along these lines that New Zealand has achieved such wonderful results.⁷

In closing let me emphasize the importance of this campaign. Our present asset of man power, we hope and expect, is sufficient to be the deciding factor in winning the war. It may be, however, that the future will demonstrate that the real victor in this struggle is the nation which most carefully conserves its infant life. We must profit by the experience of France. We must awaken to the fact that the preservation and perpetuation of our national life depend upon saving the babies in 1918 and in the years to come.

BIBLIOGRAPHY

1. L. Emmett Holt, M. D.: *Transactions of the American Association for Study and Prevention of Infant Mortality*, 1913.
2. Samuel McC. Hamill: *Influence of War Upon Infant Mortality and Its Meaning*, *American Journal of the Medical Sciences*, Vol. civ, No. 1, January, 1918.
3. Cressy L. Wilbur: *Birth Registration: An Aid in Protecting the Lives and Rights of Children*, Monograph No. 1, Children's Bureau U. S. Department of Labor, 1914, Washington.
4. *Annual Report of the Society for the Health of Women and Children*, 1913. Dunedin, New Zealand.
5. Mrs. Max West, *Prenatal Care of Children*, Series No. 1, Children's Bureau, 1915, Washington.
6. *Explanatory List of Diagrams Relating to Deaths of Infants*, Department of Commerce and Labor, Bureau of the Census, 1910, Washington.
7. *New Zealand Society for the Health of Women and Children*, *Infant Mortality Series No. 2*, Children's Bureau, 1914, Washington.

SOME OBSERVATIONS IN GALL-BLADDER SURGERY*

By J. W. BOWEN, M. D., F. A. C. S.

DICKINSON, NORTH DAKOTA

In reviewing the literature on surgery of the gall-bladder for the past five years one finds quite a diversity of opinion as to the time, the method, and the extent of operation; and also that many are inclined to follow a more or less fixed rule rather than make each and every case a problem unto itself.

The first great factor in the surgery of gall-bladder cases is the mortality risk to the patient. The second, What can we promise in way of cure, either permanent or for a given period of time? I think it would be well for each one of us to weigh every case carefully and consider what we would do if the patient were one of our own family or ourself who was suffering from the same affliction.

Not long ago in discussing the surgical problems of the gall-bladder and biliary passages, a surgeon made the statement that, in his last one

hundred consecutive cases, he had done one hundred consecutive cholecystectomies; and so, you will observe, in nearly all surgical procedures the pendulum swings greatly in one direction for a given period of time, and then swings back to a more moderate vibration.

It is not the purpose of this paper to go into the methods of diagnosis of the diseases of the gall-bladder and biliary tract, but it is, rather, to discuss the surgical conditions as they may present themselves from time to time,—for instance, cases of cholecystitis with or without stones, stones in the duct causing obstruction, cholangitis causing pancreatitis or pancreatitis causing cholangitis, empyema of the gall-bladder, and gall-bladder perforation.

From various hospital reports one finds that the mortality of gall-bladder cases runs from a little more than 2 per cent to as high as 10 per cent, which is too great a variation, it seems to me.

*Read at the 31st annual meeting of the North Dakota State Medical Association, at Fargo, June 19 and 20, 1918.

In compiling a report of our own cases I find a great difference in the mortality-rate as our methods and pre-operative treatments have changed. In 200 cases operated on by us for diseases of the gall-bladder and biliary passages since 1909, the first 50 were subjected to cholecystotomy alone. In that series we had 2 deaths, recurrence of stones in 2 (which were operated on later; one by myself and the other elsewhere); 2 other patients have had symptoms of cholecystitis and may have a recurrence of stones, but have not suffered severely enough to submit to a secondary operation. In 40 of these cases stones were found in the gall-bladder at operation; 9 gave marked evidence of cholecystitis; and 1 had carcinoma of the gall-bladder with extension along the lymphatics of the ducts and into the liver. The last-named patient lived only two months. Whether it was primary in the gall-bladder or not I do not know. Only an exploration was done.

Of the two patients who died each was suffering acute pain and jaundice. The temperature was one hundred in one case, and one hundred and three in the other at the time of the operation. One had marked evidence of cholangitis; no stone could be palpated in the common duct. Considerable difficulty was encountered from hemorrhage, which we finally controlled. The gall-bladder was opened, several stones removed, and drainage instituted. Immediately after operation the temperature rose, and the patient's pulse became very rapid, and she died two days later with marked evidence of general infection.

The other death was in a case of gall-bladder perforation, and a large subhepatic abscess was encountered. I drained the abscess and also the gall-bladder, but the patient died seven days later from a general peritonitis. This was a severe case, and I do not see how death could have been prevented. In the former case I cannot help but think that, had I waited until the patient's acute symptoms had subsided, and treated her expectantly until the jaundice had cleared up, she might have recovered and been successfully operated on later.

The next 100 cases consisted of 60 with stones in the gall-bladder alone; 4 with stones in the gall-bladder and common duct; 3 with empyema of the gall-bladder complicated with stones, one of which had perforated; and 33 cases of cholecystitis not complicated with stones. In the 60 cases with stone in the gall-bladder without further complications, cholecystectomy was done. In the 4 with stones in the gall-bladder and common

duct we did a cholecystotomy, the stones being removed from the ducts and the gall-bladder, and the ducts well drained, the drainage-tube being placed down to but not through the opening into the common duct. In the cases of empyema cholecystotomy was done; the stones were removed, and both the gall-bladder and the perigall-bladder regions were drained. In two of these cases of empyema cholecystectomy was done, one case in two and the other case in three weeks after the primary operation. The case of perforation was drained, but the patient was in a very low state and died three days later with evidence of general infection and hepatic insufficiency. In the 33 cases of cholecystitis not complicated with stones, cholecystectomy was done, and all the patients made an uneventful recovery except one, who developed pneumonia shortly after the operation and died three days later. This fatality could possibly have been prevented had I considered more seriously an acute bronchitis from which the patient was suffering.

Of the next 50 cases, in 35 there were stones in the gall-bladder; in 3 there were stones in the gall-bladder and common duct; in 3, empyema with stone; in 2, a marked pancreatitis and cholangitis; and in 7 there was cholecystitis alone. In this series in the 35 cases with stones in the gall-bladder without further complications a cholecystectomy was performed. The three cases of empyema were treated by cholecystotomy and gall-bladder drainage, followed by cholecystectomy two and three weeks later. Two cases of pancreatitis with cholangitis were drained by cholecystotomy. In the three cases with stone in the common duct, both gall-bladder and duct were drained. One of these was a case which had been operated on twice before for cholelithiasis nine months and two years before. Owing to the fact that in this case stones recurred so soon in the gall-bladder I drained and passed a sound through the common duct, and did a cholecystectomy. As soon as the drain from the common duct was removed, the patient again developed symptoms of obstruction with a more pronounced jaundice than before. She presented a very gloomy outlook within thirty-six hours after the removal of the duct drain. We had her under observation for two weeks, but she made no improvement whatever. Six weeks later she was operated on elsewhere. The duct was drained into the posterior wall of the stomach, but being in a grave condition at the time of the operation she survived only a few days.

Had I to operate in such a case again, I would

not think of removing the gall-bladder, especially with a patient in as serious a condition as she was. Had the gall-bladder been left, a cholecystenterostomy could have been done, and a much more serious operation avoided. In the two cases of pancreatitis associated with cholelithiasis draining was done by way of the gall-bladder alone. One of these patients developed an obstinate diarrhea and jaundice the day following the operation, and died one week later. I cannot see any possible way by which she could have been saved. In the seven cases of cholecystitis without stones cholecystectomy was the treatment, and all the patients except one made a good recovery. She was a woman of a highly neurotic nature, and says she has experienced little, if any, relief from the operation.

In reviewing this series of cases I have endeavored to follow them up as closely as possible so as to ascertain how many patients were cured of their symptoms completely, how many were relieved, and how many obtained no relief whatever. I have found that in the cases of cholecystitis with stones with no further complications the patients have practically all made complete recoveries with little or no recurrence of stones. The patients with empyema of the gall-bladder have recovered after drainage followed by cholecystectomy. Two patients with empyema where only drainage was done, had recurrence of stones, and had to submit to another operation, one two years, and the other four years, afterwards. The cases of stone in the common duct have not been so satisfactory as far as ultimate cure is concerned. In two of them especially there were recurrences of symptoms and slight attacks of jaundice at different times, and no doubt these patients will need further surgical attention. In the cases of cholecystitis without stones the majority of patients have been either greatly relieved or completely cured. Only four have had pain and gastric symptoms almost as severe as before operation, and I am inclined to consider seriously the possibility of mistaken diagnosis. Probably they would have been better off had they received medical rather than surgical treatment.

Just a word regarding the gall-bladder cases with acute symptoms: I have been firmly convinced that nearly all patients with gall-bladder disease do much better, and have a much easier convalescence, if operation is deferred until the acute symptoms have subsided; and I firmly believe that the acute gall-bladder conditions should receive no other than expectant treatment

until you are convinced the symptoms are growing progressively worse, and will not subside under any other form of treatment, but, fortunately, such cases are rare. I believe 2 per cent would safely cover all the pathological conditions of the gall-bladder and bile-ducts demanding immediate emergency surgical treatment.

CONCLUSIONS

From the standpoint of cure and low mortality surgery of the gall-bladder offers one of the most satisfactory fields for the surgeon.

In cases of cholecystitis without stones not complicated with disease or obstruction of the ducts, cholecystectomy is the operation of choice and is a comparatively safe procedure. Empyema of the gall-bladder or gall-bladder perforation should be drained, and cholecystectomy done later if possible. These cases are especially adapted to the two-stage operation.

With cases of cholangitis, pancreatitis, or obstruction of the common duct, cholecystostomy and drainage are a better and safer procedure, and in none of these diseases would I recommend a cholecystectomy.

Do not inflict a long and hazardous operation upon a patient when a short and simple one will carry him through a dangerous period.

I think that, should the two-stage operation be employed more, our mortality would be lower and the percentage of cure greater.

Plenty of time should be taken in making a diagnosis of cholecystitis when there is an absence of history of gall-bladder disease. It is the cases of mistaken diagnosis that give the low percentage of cures in cholecystitis without stones.

DISCUSSION

DR. V. J. LAROSE (Bismarck): There is nothing that I can really add to the doctor's paper, which I enjoyed very much. He has covered the subject thoroughly, especially from his own experience, and has worked out his cases very well.

Rather than add anything I might emphasize one point the doctor makes, and that is in your pre-operative treatment and in the preparation of these cases for operation give each case thorough study. In cases where there is jaundice, we know that there is liable to be trouble with post-operative hemorrhage or capillary oozing due to failure of the blood to clot. If we find that the blood-clotting is delayed we must institute proper measures for overcoming the delay before operation.

There is a great deal of controversy now about cholecystostomy and cholecystectomy. I believe that cholecystectomy is becoming the operation of choice in more and more cases right along, but, of course, as Dr. Bowen has brought out in his paper, there are certain cases where simple drainage is the best treat-

ment. When the gall-bladder once becomes infected, it is pretty hard to get rid of the infection; and stones, of course, are simply a result of infection. The infection of the gall-bladder itself is usually in the deeper glands, and sometimes mere drainage will not serve to relieve this condition, and I believe a great many advance this reason for removal of the gall-bladder.

DR. FRED EWING (Kenmare): I was very glad to hear the essayist emphasize the fact that we should drain our empyema cases before we attempt to do anything in the way of removing the gall-bladder. We had a little discussion about that last year. These empyemas of the gall-bladder are septic, and our chief duty is to save the patient's life and, later, if possible, to do the operation.

THE PRESIDENT: Are there others who wish to discuss this paper or to ask any questions of Dr. Bowen? I might say the privilege of discussing any papers is extended to visitors, as well. Dr. Ide, can you give us some discussion on the subject?

DR. A. W. IDE (Brainerd, Minn.): Mr. Chairman and Gentlemen of the North Dakota Association: I enjoyed the paper of Dr. Bowen very much. I think he has summarized the literature on the subject of cholecystectomy and the drainage of the gall-bladder very well. The consensus of opinion is undoubtedly in favor of cholecystectomy, but, if we attempt to operate on gall-bladders and go in with a preconceived notion that we are going to remove the gall-bladder, we are making a very decided mistake.

The question of exposure, it seems to me, in the technic of operating on gall-bladders is the important feature. Gall-bladder surgery is difficult in that the deeper structures are relatively inaccessible, and it is difficult in direct proportion to the accessibility of these structures.

I have just returned from the American Medical

Association meeting in Chicago, where I heard some good discussion on anomalies of the biliary ducts and arteries. We cannot tell just where these are, and if we attempt the removal of the gall-bladder, including the cystic duct, we may get into serious trouble, especially in the presence of acute or severe inflammatory reaction.

I saw a clinic a few years ago in the Massachusetts General Hospital in Boston that impressed me very much in this matter of exposure. I saw Dr. Samuel Mixer operating in a gall-bladder case. He is opposed to the use of retraction, and I saw him take a gall-bladder through a small wound without the use of retractors. I think that young surgeons find it extremely difficult or impossible to work in any such a way, and I felt we would not be justified in doing so.

I also saw another case (a cyst of the liver) in the same clinic where the exposure of the liver was difficult. The incision was extended across. I think transverse incision in these gall-bladder cases, particularly cases which are not infected, is highly advisable.

DR. BOWEN (closing): That is a very good point Dr. Ide brought up in regard to exposure. Sometimes we have difficulty in these cases, especially on large fleshy people,—and a good many are fleshy. I have tried both incisions, but I believe in especially selected cases that transverse incision is really the incision of choice. However, I do not use transverse incision altogether. I do not think it is necessary in cases where the patient is thin or where you do not anticipate much trouble. Oftentimes, though, you can convert a longitudinal into a transverse, that is, semi-transverse, incision; but in a fleshy person where the ducts are inaccessible transverse incision is the one to use. I do not believe it is good practice to use a short incision for the gall-bladder, for you cannot do good work with it.

THE CONSTITUTIONAL PSYCHOPATHIC STATES

By FREDERICK P. MOERSCH, M. D.

Captain, M. R. C.

MINNEAPOLIS

In a discussion of the constitutional psychopathic states, we enter upon one of the most important, and, at the same time, the most interesting, problems confronting the medical man in his military work. It is with this view in mind that one feels it advisable to refresh his memory on this important subject.

As the months pass, and as the vast amount of clinical material presenting itself with each new draft is gradually classified, one is astonished at the great number of cases falling into this group; and so common is the condition that it seems advisable to call special attention to it.

Prior to the war these patients wandered about through society; a few fell into the hands of the law, and a scattered few might be found in any institution for the care of the mentally

sick. They rarely received the study they deserved, nor did they come to the attention of the profession as often as they should. The reasons for this condition are numerous. As a rule, such individuals are not committed to the asylums, and they seldom congregate in sufficiently large numbers in any one clinic to permit of thorough, systematic study. Then, too, they have usually been considered as belonging to other forms of nervous or mental conditions. With the net of the draft drawing into it all classes and all types of men, we suddenly come face to face with a problem that is most important, and one that requires study and solution.

In Europe this condition has been recognized much more fully than in this country, due to the prevailing conditions and the opportunities for study. In this country recently the War De-

partment has very timely and seriously come to realize the great problem, and, at the very outset, has made provision for it in its classification of the mental conditions; and it may be said, in passing, that it forms one of the greatest sources for rejection that we have to contend with. It is due to the importance of the condition and to its need of recognition that the subject is presented, in order that we may have a more comprehensive understanding and appreciation of the task before us all as military men.

It may be stated that in formulating this group no other group has been subdivided, but that we have here to deal with a distinct entity which stands between the true insanities, as we usually use the term, and the psychoneuroses. We may first review the groundwork and the fundamental symptoms, then the differential diagnosis and the classification, and finally elaborate the various types.

The group presents all gradations, and includes individuals who have presented evident psychic anomalies since childhood. These individuals have normal traits that have become pathological. To the casual observer they may appear as perfectly normal individuals, or they may suggest persons with mild forms of insanity, such as maniac depression or dementia precox, but they must not be confused with them. They must also be separated from those suffering with epilepsy, hysteria, paranoia, and the various degrees of mental deficiency.

Their personality lacks the fullness of the normal individual. They retain a circumscribed infantilism of mental development, which is innate and cannot be eradicated. There is in them an apparent lack of full judgment. In the minor affairs of life they may succeed, but in the great undertakings of life they fail, which is quite contrary to the usual experience, where it is the minor problems of life that seem to upset us, while the great problems are met and dealt with adequately.

Character is always impaired, and as we pass over the group this will be a constant finding, as will also the anomalies of conduct. In differentiating this group we must appreciate its constitutional character, and that we are here dealing with something inborn, not the result of some sudden change. Undoubtedly, environment does play a part, but only in the accentuation of some existing condition; therefore it is very essential that a complete and thorough past his-

tory be obtained. By this means the psychoses may be excluded, at least in part. If only the existing picture is studied, we may make only too frequently the mistake of assuming that we are dealing with one of the true psychoses.

As we go over the various groups the true differential diagnosis will suggest itself. Here one need speak only of the more marked features. With the paranoias we may have some difficulty, and it is true that here frequently is the origin of the more serious condition. As a rule, in the constitutional psychopathic states the picture presented is much milder, systematization is poorly developed, and there are no definite trends, but the paranoid ideas are present in all thoughts and ideas, mild, it is true, but greatly impairing the quality, character, and conduct of the individual. Again, the paranoid tinge may vanish for a time, and appear only under the stress of the environment.

In the constitutional psychopathic states there are no true hallucinations, the delusions are not fixed, and reasoning usually is of avail, at least for the time being. There is at times some slight clouding of consciousness, but never for any prolonged length of time, and usually the cases may be distinguished from the epilepsies without much difficulty.

In distinguishing the constitutional psychopathic states from the functional ailments, if one will recall that the condition is the result of the innate lack of judgment, personality, character, and conduct, and is not due to the present existing surroundings, one will have but little difficulty. In the functional conditions the complaints usually involve the bodily or organic sphere; in the psychopathic states it is the character, personality, and conditions in the environment that are at fault.

Feeble-mindedness may at times complicate the picture, but, as a rule, feeble-mindedness, as we know it and as it is classified, presents quite a different picture. In the psychopathic states the actions, judgment, and conduct occur, in spite of the apparently good development, as if due to a lack of balancing power, while in the feeble-minded the actions are the result of impaired or absent development, thus presenting two fundamentally different problems.

In passing on to the classification one finds a slight difference of opinion as to the mode of grouping; but this is very slight, and need not be considered a very important matter. The classifications are all worthy of consideration, and the choice is purely a matter of personal

opinion, as all the conditions are included. In our work we have found the following the most applicable, and thus present it for consideration:

THE CONSTITUTIONAL PSYCHOPATHIC STATES

1. Emotional instability (excitable psychopaths).
2. Inadequate personality (unstable psychopaths, spendthrifts, wanderers, dipsomaniacs).
3. Paranoid personality (queer, odd psychopaths).
4. Pathological liars and swindlers.
5. Criminalism (antisocial).
6. Sexual psychopathy.

(1) At the head of the list may be placed the emotionally unstable or excitable personalities. This makes up the largest separate group. The cases merge so imperceptibly from the normal that it may be difficult to distinguish them, or to determine definitely whether they belong in this group or are simply due to some current environmental change. When fully developed there is little trouble in their recognition. The excitability and the emotional reaction are marked. Any slight cause produces changes out of all proportion to the cause, and they may be so severe that the individual becomes dangerous to himself and to others. These patients are usually very sensitive and easily upset, are frequently complainers, and are not infrequently suicidal. There is usually some basis for their action, or some will be assumed, such, for instance, as family affairs, discouragement, quarrels, jealousy, etc. In all outbreaks of excitement the individuals may become violent, and may even commit murder. They may present momentary clouding of consciousness, may be sullen or at times hysterical, and will have attacks of laughing or crying, sleep-walking, and tremors.

These cases are very common and demand a thorough study, for, due to their rather high grade of intelligence, and at times apparent normal reactions, they may go unnoticed. If very mild, the training and the routine of military life are most advantageous; but, if the history shows a doubtful past with periods of maladjustment, with difficulties either in their own personal problems or in the adaptation to circumstances, they must be rejected. Many a good man, who has enjoyed the best of education and has gotten along well under the ordinary demands of life, presents just such a condition, and he must be recognized in order to save himself

and the Government a great deal of trouble and expense.

(2) The next group in frequency, if indeed not equally frequent, is made up of those individuals having an inadequate personality. They are characterized by a weak will and unstable personality, or character. They are usually bright and keen, and as children were looked upon as very promising; but, being very superficial, their resulting knowledge and memory are very deficient. There is a marked tendency to exaggerate. They have all kinds of artistic tendencies, but no sharply defined intellectual interests, everything remaining rather unclear and confused. They continually complain of their hard luck and have innumerable reasons for existing conditions. They go through life and make occasional bright, but never long-lived, splurges. Their self-esteem is notable. The disturbance of the will is most marked, and they are readily tossed about, frequently changing their plans and their work. Due to the lack of will power they may take to drink, become sexually lax, and often are extremely foolish in their conduct and actions. They are easily led, thieving is common to them, and they frequently fall into the hands of the law. Not uncommonly they are emotional and very impulsive. It is not at all unusual to find them becoming wanderers, "ne'er-do-wells," spendthrifts and dipsomaniacs.

In military life they are unable to adjust themselves to routine and discipline. They are continually getting themselves into trouble. They are the "butts" of the company, and constantly find themselves at a loss as to what to do. It is only by a thorough study of the past life of the individual that one can really form a correct opinion as to these cases, for in a casual examination they usually show up so well that an examiner may be misled. It is only by a careful inquiry into the past and the determination of the failures, or frequent changes, that one can arrive at a correct diagnosis.

(3) Paranoid personality constitutes a somewhat smaller group. Here are found those individuals who are prone to be classed as queer and odd. They invariably present a marked hereditary taint, about 20 per cent of the parents being abnormal, and there are all gradations, from the slightly queer individual up to the marked paranoid. It is here that the other paranoid conditions must be thought of, and it is undoubtedly true that many of these are early cases of true paranoia.

These individuals with paranoid personality

are characterized by poor judgment. They are easily confused, their productions are loosely put together, and their entire existence seems to have a delusional or paranoid trend. There is an inability to appreciate their surroundings. They are changeable, queer and suspicious, and are constantly laboring under misapprehensions. They lack the ability to weigh things, are always giving themselves the worst of the deal, and, due to a marked egotism, feel that they are being held down and not permitted to go forward because of jealousy, etc. Under the strain and the pressure of the military life they usually break down, and should, with but a few mild exceptions, be eliminated from the Army.

(4) Pathological liars and swindlers form a group which includes also a small number, but merits consideration. In our work we have had but few cases, and cannot speak from experience as to the severity of the disturbance; but, judging from the other groups, and the constitutional makeup of the individuals, it seems that here, as in the foregoing groups, a great deal of care should be exercised. This group has also been designated "*pseudologica fantastica*." It is characterized by marked unsteadiness and aimlessness and a liveliness of the imagination with marked admixture of reality and fiction. At times these people exhibit a paranoid trend. They are great dreamers, rather childish, and enjoy their actions. They fully realize that they lie, but, nevertheless, seem unable to do otherwise. They tell sad stories, are criminal, and buy without the slightest intention of paying. Sometimes they improve with age, but they also may grow worse. They show marked incompleteness of development, and seem to remain childish, thus lying and stealing without any reason. Just what is to be done with this type of man is somewhat difficult to say. Each presents a problem in itself. Certainly they require guardianship and restraint, and are not desirable individuals to have in an organization.

(5) Criminalism (antisocial) characterizes a group who are the enemies of society. They are unable to adjust themselves to the demands of society, and lack all impulse to help their fellow-beings. They are continually in difficulty, they do not like to work, their grasp is clear, but they have no ambition, and their fund of knowledge is poor. They are one-sided and think only of the moment. They lack all emotional responsiveness. There is in them no aim or plan. They are cruel, and at school they were the torment of their teachers. They are always seeking quar-

rels, and are antagonistic to all. There are marked narrowings of the horizon and a tendency to exaggerate all their happenings. They are sexually loose, are apt to steal, and forgery with them is common. They tend to drop back after being helped, and they possess no steadfastness of purpose. Some are sullen, think they are martyrs, and become bitter toward society.

It does not seem proper to consider criminals as forming a distinct class, but certainly these persons are, if any may be so termed, born criminals.

(6) Sexual psychopathy determines the final group, which is made up of the sexual psychopaths. Here we find anomalies of different degree and nature. Masturbation is frequent, but, as a rule, the individual that has practiced self-abuse soon finds himself alone, and with physical training and instructions, mends his way. It is the sexual inversion and perversion that is the marked feature of this group. Naturally, one must not overlook other factors, as very frequently one will find that the foundation of the trouble may be some form of mental deficiency or other constitutional defect. With each new draft many or, at least, a surprising number of sexual perverts, are weeded out. It is undoubtedly a much more prevalent condition than the average man thinks. Very naturally these cases must be gotten away from the other men as soon as possible, both for the good of the man himself and for the protection of the others.

Notwithstanding this rather superficial survey, one may, nevertheless, realize how important it is to deal adequately with the constitutional psychopathic states in the formation of an army. Eliminating these men is, indeed, one of the greatest tasks that we have, for, sooner or later, they find themselves in personal difficulties, and naturally they have a very detrimental effect on the other men. It must be appreciated that the diagnosis of these cases is very difficult at times, and each case must be thoroughly studied. There is a tendency to use this group as more or less of a scrap-heap and to relegate to it that which cannot be otherwise disposed of. This is much to be regretted. It is at times easy to say that a man has an inadequate personality if he does not seem to get along well, but that is not sufficient. More than that is required and, as stated above, one should make every effort to study each case thoroughly for any other possible conditions.

In many of the cases so diagnosed the patients are mentally deficient and should be so consid-

ered, but it is not necessary to add an emotional personality, for, if one is deficient, emotionalism may be expected. Again, if an individual presents a paranoid trend he should be studied for dementia precox, or the more rare paranoia, or even the circumstances of his environment must be investigated, for the trouble may all be due to a maladjustment and not at all to a mental condition. Not infrequently we have occasion to see men who, so to speak, have had the "buck" passed to them so frequently that they have become worried, tired, and what not. Very likely such an individual may have a weak makeup, but, with proper adjustment, he may make a good soldier, and we must make every effort to save such an individual.

The necessity of studying case-histories might be considered here, but it seems unnecessary to enter further into a discussion of these cases. With a little care and study of the past history no difficulty should be found in arriving at an intelligent diagnosis.

Camp Upton, N. Y.

MISCELLANY

RECIPROCITY IN MEDICAL LICENSURE

The subject of reciprocal medical licensure, which is of interest to all physicians, is thoroughly covered in the following statement, made in the columns of the *Journal of the American Medical Association*:

Thirty-nine states have established reciprocal relations with seven or more other states by which the license to practice medicine is accepted in lieu of a second written examination. Generally speaking, the methods by which such reciprocal relations are being administered at the present time tend toward the lowering of educational standards. There appear to be three distinct provisions under which such relationships are established. A few states take the ground that under the reciprocal agreements they must accept all candidates who apply for registration holding licenses from the other states. Under the widely differing standards held by the various boards, such an agreement would leave a wide open door whereby poorly educated physicians as well as others could secure a license in

any of the states included under such an agreement, and the lowest educational standard enforced by any of the states would be the highest standard which could be effective. To limit the relationships to only a few states merely decreases the evil, since even the best regulated state board will occasionally register candidates who may not in all respects meet the requirements of some of the other reciprocating states. Furthermore, to limit reciprocal relationships to only a few states is to deprive the physicians of the state of the wider privileges which they should have through interstate reciprocity. Another basis for reciprocity, adopted by a larger number of states, provides that the license of the other state be accepted in lieu of the written examination only, and that the applicant must meet the educational and moral requirements of the state which accepts him under the reciprocal arrangement. In other words, each board retains the right to use its discretion in the acceptance of any candidate for registration under reciprocity. This plan is superior to the first one mentioned, in that it enables each board not only to establish relationships with a larger number of states, but also to uphold its educational standards for every applicant registered. Unfortunately, a few states, even with this arrangement, are not administering its provisions as strictly as might be desired. The third plan is that under which any well qualified physician who has been licensed in any state will be accepted no matter whether that state reciprocates or not. Eight states, Arizona, California, Colorado, Delaware, Maryland, New Hampshire, New Jersey, and North Carolina, have now adopted this plan and the number should be increased. It is the best provision for all parties concerned. The well qualified physician who desires to move from one state to another is not prevented from so doing through the lack of legal provision for reciprocal relations or through the arbitrary refusal of a licensing board to provide for such relationships; the state law is upheld since the board accepting such candidates lays strong emphasis on the moral and educational qualifications of the physician and, finally, this plan upholds the best interests of the public since only well qualified physicians may care for the sick and injured in the states which thus accept them.—*Journal of the A. M. A.*

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.

H. J. ROWE, M. D. - - - Casselton, N. D.

H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

SEPTEMBER 1, 1918

LOCAL AND MEDICAL ADVISORY BOARDS

In a recent notice that came through the Adjutant General's office of Minnesota, Provost Marshal Crowder has issued a new order, dated Washington, August 2d, which is printed herewith and is self-explanatory.

Washington, D. C., Aug. 2, 1918.

Adjutant General.

St. Paul, Minn.

Number 2408.

While it is recognized that local boards and medical advisory boards have, as a rule, performed their work efficiently, recently reported rejections of inducted men at camps show that many local boards and medical advisory boards have performed their work inefficiently. The rejections at some camps of men inducted as physically fit for general military service have been as high as 34 per cent. Many complaints are being received from camp commanders. One Major General writes as follows:

"I invite your attention to the obvious physical unfitness of many of these men, unfitness which should have been apparent even to a layman."

This matter demands immediate attention and instant correction. Immediately instruct all local boards by telegraph that they must, before entrainment of contingents under August 5th call, assemble all registrants to be inducted and carefully inspect their physical conditions in order to prevent sending to camp such as are obviously not physically fit for general military service under existing standards in Form 75. This physical inspection should be made promptly and expeditiously and must not delay entrainments on schedule time.

Promulgate this entire telegram by telegraph to all local boards and require from them immediate acknowledgment and statement that they are proceeding in ac-

cordance with foregoing. Instructions will be issued later as to procedure to be followed at subsequent August entrainments.

CROWDER.

The larger number of applicants or registrants come through the local boards, while the smaller number go to the advisory boards. The local board is composed of several members, only one of whom is a physician or a surgeon, and he is supposed to pass on all applicants and to discover all of their various defects or diseases, which is, manifestly, a very difficult thing to do.

An advisory board, however, is composed of nine physicians or surgeons, including specialists, and in this way the unfit can be more easily qualified or disqualified, because so much time is given to each registrant. The evident result of this combined method of examination has been that a number of unfit men have been inducted into the service; and, perhaps, in this way both boards have been criticised more than they really deserve. Each man who comes into camp, and is detained there for a few weeks, is carefully studied and examined a sufficient number of times to prove or disapprove his qualifications. Each registrant costs the Government, if he is rejected at a camp, approximately \$150, and more if the camp is at a greater distance from the place of registration. If possible there ought to be some means of preventing wholesale induction of misfits into the camp; and this, as is known in every camp, can be done only by careful observation of many medical men. Even though many of these men pass the medical advisory boards, some of them are returned on conditions which develop slowly and gradually under their changed conditions in a more or less strenuous camp life, change in food, and change in climate, which often bring out the unfitness in unsuspected men.

The matter of underweight seems to be an important consideration, and yet it is commonly known that many men who are below par in weight acquire anywhere from 10, 20, to 30 pounds by the regular routine life in camp and through the physical exercises which they undergo. So far the Government has provided for a certain amount of loss which is the result of camp life. Sometimes this underweight is the only objection found in the registrant. Assuming that all other conditions are normal, it seems fair to believe that most of these men, who work in the open air, and who have physical exercises under skilled directors, will rapidly gain in weight.

However, the orders of the Provost Marshal must be carried out.

Speaking for the four medical advisory boards in Minneapolis, one may safely say that the men who appear before them receive very careful attention, and are not passed unless they are found to meet all the requirements even though some of them are put in Group B as remediable cases. The task of examining all these men is tremendous, and one must not be discouraged to find that mistakes and errors creep into the examining boards, just as they may creep into the office of the best physician.

WHY SHOULD THE SURGEON GENERAL APPEAL FOR MEDICAL OFFICERS?

The following editorial is published in practically all medical journals at the request of association of the medical journals of America:

Of the 146,000 doctors in the United States, it is a safe calculation that at least 70,000 of this number are within the age limit, from 21 to 55 years, and are physically and morally qualified to serve as Medical Reserve Corps officers.

Why, in view of this fact, the Surgeon General's Office should be hard put to secure a sufficient number of medical officers to supply immediate demands and to furnish a reserve force of between forty and fifty thousand doctors, is not quite comprehensible.

Every qualified physician, knowing how essential his services are to his country at this particular time, should consider it not only his duty, but a privilege, to take part in this glorious struggle for humanity and democracy.

This is the time when individual opinion must be sacrificed for the benefit of the whole, and the time is near when every doctor must be in one or two classes: either a member of the Medical Reserve Corps or United States Army, or in the Volunteer Medical Service.

LOWERING THE DEATH-RATE

Knowing how to do a thing is not enough, for one may know this and yet not be able to put his knowledge and ability into action. Every sanitarian, if not every physician, knows how to reduce the death-rate in any community, yet few men of either class know how to enforce the measures that they know will accomplish this end. In other words, they do not know how to arouse community interest where the death-rate itself is not sufficiently high to startle such community, and whip it into action.

At the recent annual meeting of the North Dakota State Medical Association, its Committee on Public Health, through its chairman, Dr. C. J. McGurran, made an admirable suggestion as to the means of accomplishing this desirable end; and we think it contains the germ of a plan that might receive nation-wide adoption.

After showing the change in the death-rate of the five largest cities in the state in the past five years, the committee fixed 15 deaths in 1,000 population as a rate that should not be disregarded. In Grand Forks the death-rate in 1917 was 10.8; in Fargo, 11.2; in Minot, 15.1; in Jamestown, 20.2; and in Bismarck, 25.6.

The above rates, as compared with the rates in the same cities in 1912, showed a remarkable and inexplicable variation. Taking the two extremes, we find a *decrease* of 23 per cent in Grand Forks and an *increase* of 71 per cent in Bismarck. This means a variation of 94 per cent. No doubt, there is some explanation for a part of this abnormal variation; but, in the main, the difference is due to living conditions, that is, to controllable causes.

This committee suggests that a death-rate in North Dakota cities, large and small, of over 15 in 1,000 of population be considered abnormal, and that any abnormal rate be referred to the State Council of Defense, which, of course, could interfere in order to save the man-power of the Nation, at least during the World War emergency.

But a permanent plan for the saving of life is essential; and we believe the germ of such a plan is to be found in Dr. McGurran's suggestion. If the medical, sanitary, and other scientific societies in every state would fix a maximum death-rate that should not be tolerated in any city of such state, public opinion could be so educated as not to tolerate it; and we are certain, no legislature would refuse to confer upon a state board of health, at least, the power to ascertain the cause of a condition that is harmful, and, to some extent, disgraceful.

This plan passes from the abstract to the concrete, from the general to the specific; and in this form it makes definite appeal to the human intelligence. To be concrete and specific in our own suggestion, let us consider the case of Bismarck, N. D. In 1912 its death-rate was 14; in 1917 it was 25.6, which is an increase of 83 per cent. If this large increase is due to preventable causes, then the people of Bismarck should be compelled by public opinion to take

note of it, indeed, to correct it, and to do so speedily.

We hail the day when the life of a single child or adult from a preventable cause will attract sufficient attention to set into motion efficient machinery for the removal of such preventable cause, in whole or in part.

"WELL DONE, MINNESOTA"

The *Journal of The American Medical Association*, in an editorial under the above caption of the date of August 17, 1918, shouts its approval of a disgraceful act of a clique of men in the Minnesota State Medical Association, which led to the establishment of *Minnesota Medicine*, and that "personally conducted" organ of one of the greatest scientific organizations in the world proceeds to cover up the disgrace by statements known to its editor to be false.

As if the *Journal of the A. M. A.* had no circulation in Minnesota, the publishers of *Minnesota Medicine* have sent a reprint of the editorial to the members of the Minnesota Association, thus specifically endorsing the falsehoods in that editorially.

We shall deal with the subject fully in our next issue.

MISCELLANY

WHY THE STORK LEFT

FRED ELMER LEAVITT, M. D.
ST. PAUL

The stork flew over from somewhere
One cool September night,
And lit on top our chimney-pot,
Wearied from his flight.

We knew that he was coming soon,
But did not know just when;—
Storks have such ways, on baby days,
Of coming after ten.

I'd wound the clock and said my prayers,
Turned down the bed and light,
When Gretchen said "I hear o'erhead
Strange sounds from out the night."

With this I threw the shutters up,
The door I opened wide;
For, if the bird was what she heard,
We'd welcome him inside.

Though none came in and none was seen,
He stood not far away,
Perched on the edge of chimney ledge,
Waiting the break of day.

"It is some freak of wind or rain
That leads you to surmise
The sounds you hear are other, dear,
Than echoes from the skies."

"No, no; not so," my love replied,
"To me it is quite plain:
I hear the beat of little feet;
You hear the wind and rain."

* * * * *

All through the night we kept our watch,
The doctor, too, was there;
His thoughts were paid to skilful aid,
Mine were in earnest prayer.

But ere the stars had gone to sleep,
There came one little ray
From off the strand of baby-land,
Ten million miles away.

The stork had flown, the chimney-pot
Stood vacant in the sky;
His work was done, our babe was born,—
And that's the reason why.

—The Medical Pickwick.

A MINNESOTA SURGEON'S WORK NEAR THE BATTLE FRONT

Dr. A. M. Hanson, of Red Wing, in a letter to his relatives, gives a graphic account of the work done by surgeons in a hospital near the firing-line. His letter, of course, was not intended for publication, which perhaps adds to its interest. It appears in the *Red Wing Republican*, and we are glad to put it before medical readers in just the form it was written for lay readers.

It is as follows:

The rush has let up a little so that we can stop to breathe and have time to realize that we have people back home. When you are averaging about three hours' sleep out of the twenty-four, often not even getting your shoes off, and spend the rest of your time sawing, and cutting, and tying up blood vessels, you lose all track of time, of day and night. You know that the cases can't be operated fast enough and you don't notice that you are tired, but just keep on and on and on, and it isn't half as hard as you might think. At one time, when so many wounded were coming into this hospital in the operating-room where two surgeons and myself were running three tables, one at each table, and no one to assist except the nurse who gave the anesthetic at each table and one nurse to get instruments ready for all three of us that we operated fifty-six cases in twelve hours. This will sound rather incredible, if you tell it to some doctor, but that will be because he has not had the opportunity to know what war surgery of today is. We cut the wound wide open and cut out all injured tissues, skin, fat, muscles, fascia, even tendons, if badly damaged, remove loose fragments of bone, pieces of clothing, bullets, pieces of shell, or whatever happens to be there; sometimes pieces of money or buttons that happened to be in the way when our enemy's missile came along, and we simply pack with gauze and place

Carrol-Dakin tubes in the wound and never put in a stitch. When we do amputations we simply pull the nerves out like so much rubber, cut them off high up and tie the blood vessels and leave the stump wide open. We have to do this, for if any of that infected tissue is left the patient develops "gas gangrene," which is rapidly fatal in most cases.

I have operated several brain cases already with good results, and I have developed a technique whereby I operate brain cases even without help and do it with ease. I am having a wonderful experience and feel that I have done right in going, as we are badly needed and are the means of saving many lives. Besides operating I have transfused blood from others into fellows dying from loss of blood and have saved a few that way also.

If I tell you where I am located you might expect me to tell you a lot of things; but that will keep until the war is over, or at least until some later date. I am my own censor, so on my honor as an officer, I can say nothing. Suffice it to say that I often see the flashes and hear the rumble of the big guns and during air raids have heard the barrage fire of many anti-aircraft guns, and I often walk around in the dark like a blind man; but I like it, especially when we are busy, and I know that I am doing something that's worth while. When air raids are on and we are at work in the operating-rooms we are forced to operate by candle-light.

I think France is a beautiful country, but beastly cold and poor conveniences everywhere. I have been in several of the largest cities of France, but as it is not permitted I cannot give any names.

BOOK NOTICES

CHEMICAL PATHOLOGY. Being a Discussion of General Pathology from the Standpoint of the Chemical Processes Involved. By H. Gideon Wells, Ph. D., M. D., Professor of Pathology in the University of Chicago and in the Rush Medical College, Chicago. Third Edition, Revised and Reset. Philadelphia and London: W. B. Saunders Company, 1918.

This edition has been carefully revised. Because of the recent investigations of the chemical processes in health and disease, many sections of the former edition have been re-written.

The subjects discussed are as follows:

1. The Chemistry and Physics of the Cell.
2. Enzymes.
3. The Chemistry of Bacteria and their Products.
4. Chemistry of the Animal Parasites.
5. Phytotoxins and Zoötoxins.
6. Chemistry of the Immunity Reactions.
7. Chemical Means of Defense Against Non-an-tigenic Poisons.
8. Inflammation, Regeneration, Growth.
9. Disturbances of Circulation and Diseases of the Blood.
10. Edema.
11. Retrogressive Changes (Necrosis, Gangrene, etc.).
12. Calcification, Concretions, and Incrustations.
13. Pathological Pigmentation.
14. The Chemistry of Tumors.
15. Pathological Conditions due to, or associated

with, Abnormalities in Metabolism, including Auto-intoxication, Uremia, Toxemias of Pregnancy, Eclampsia, Acute Yellow Atrophy of the Liver, Acid Intoxication, Fatigue, the Poisons Produced in Superficial Burns.

16. Gastro-intestinal (auto-intoxication) and Related Metabolic Disturbances.

17. Chemical Pathology of the Ductless Glands.

18. Diabetes.

Of special interest to the practitioner will be the sections dealing with the Chemistry of Auto-intoxication from Intestinal Obstruction, Uremia, Toxemias of Pregnancy, Acidosis and Diabetes. The author discusses the topics briefly, but exhaustively.

The literary style makes the work readable; the printing is free from errors, and the bibliography is well chosen and complete. The section on Diabetes is written by Dr. Woodyatt, and therefore needs no further recommendation.

The whole volume is intensely practical, and should be in every practitioner's library.

—GARDNER.

THE MEDICAL CLINICS OF NORTH AMERICA. Volume 1, Number 5 (The Chicago Number, March, 1918). Octavo of 241 pages, 35 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published Bi-Monthly. Price per year: Paper, \$10.00; Cloth, \$14.00.

Dr. Louis Mix, under "Aortic Regurgitation, Aortitis, and Aneurysm on a Syphilitic Basis" classifies the majority of cardiac lesions into four groups,—rheumatic, syphilitic, renal, and arteriosclerotic, and follows with a complete study of one case of syphilitic aortitis and aortic regurgitation.

Dr. Solomon Strouse, under "Juvenile Diabetes in Twins," gives a discussion of two cases.

Two cases are given illustrating the benefits to be derived from the Karell treatment of edema in cardiac, renal, or hepatic dropsy when other less radical methods have failed.

Two cases are also reported showing the importance of details in the treatment of angina pectoris, which minor details of treatment were of great benefit.

Dr. Chas. A. Elliott deals with the "Radium Treatment of Leukemia," giving the technic of application, and reports three cases so treated, and one case with splenectomy.

Dr. Frederick Tice deals with "Epidemic Respiratory Infections," showing the prevalence, bacteriology, and sequelae of such infections, and reports one case with hepatic involvement.

Dr. Chas. S. Williamson reports a case of polycythemia with complete discussion. The cardinal diagnostic points given are (1) moderately high-grade erythremia; (2) moderate increase in the white-blood count, the increase being principally in the polymorphonuclears; (3) enlarged spleen; and (4) with or without a high blood-pressure.

Dr. Milton M. Portis deals with "Lesions of the Right Upper Quadrant of the Abdomen," giving a discussion on the differential diagnosis.

Dr. Arthur R. Elliott treats of "Syphilis of the Aorta," and gives a review of the important considerations in connection with the condition, both from a clinical and from a pathological standpoint, illustrating the discussion with fifteen plates.

Dr. Jos. C. Friedman deals with "Reflex Gastric Disturbances and Epigastric Pain," giving an interesting discussion of the relation of gas in the gastro-intestinal tract to anginal attacks.

Dr. Julius H. Hess deals with "Tuberculin Skin Reaction in Diagnosis of Tuberculosis in Childhood." He gives a review of the nature, types, technic of application, and the interpretation of the various cutaneous reactions to tuberculin.

Dr. Frank Wright treats the subject of "Nephritis," and gives two contrasting cases.

Dr. A. F. Byfield discusses "Splénomegaly and Cirrhosis of the Liver," reporting two cases with discussion of the symptoms, splenectomy being performed in one case.

Dr. Ralph C. Hamill deals with "Insomnia," but his discussion is of no particular interest.

"Hysteria," is the title of a paper in which an analysis of one case is given.

Dr. Isaac A. Abt discusses "Asthma in Children," and shows the relation of the condition to exudative diathesis, spasmophilia, and nasal lesions. He gives the symptomatology and treatment, and cites several illustrative cases.

Dr. Maximilian J. Hubeny deals with "Röntgen Examination of the Appendix."

Dr. H. F. Holmholz discusses "Pyelitis in the New-born," and presents three cases, all due to *B. coli* infection. He gives the diagnosis and therapy (alkalies and forced fluids).

—WOODWARD.

A TREATISE ON CLINICAL MEDICINE. By William Hanna Thomson, M. D., LL. D., formerly Professor of Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; Ex-President of the New York Academy of Medicine, etc. Second Edition Revised. Octavo volume of 678 pages. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$5.50 net.

The author gives observations and opinions on a great variety of diseases and conditions, but avoids discussions of surgical, obstetrical, or gynecological subjects, merely grazing the outskirts of pediatrics at a few points, as in the brief paragraph on "Infantile Convulsions," which condition, he says, is due to "the disproportionate development of the brain in childhood."

Descriptions of symptoms are extremely interesting and are illustrated by personal anecdotes and reminiscences. There is no attempt at tabulation or classification of points, but each subject is discussed informally, as if in a conversation or an extemporaneous talk.

To be consistent with the title of "Clinical Medicine," the author avoids all mention of laboratory methods of diagnosis, except when he admits the value of examination of stomach contents in determining a hypersecretion and the blood-count in leukemia.

In view of the half-hearted way in which medicinal therapeutics is usually discussed by medical authors, Dr. Thomson's paragraphs on "Treatment" are most refreshing in their vigor and confidence. He administers aconite in a variety of conditions, including tonsillitis, arteriosclerosis, and gonorrheal urethritis. He believes that Graves' disease is of gastro-intestinal origin, and considers as proof the fact that his patients improve markedly on the administration of mercurial cathartics. He has cured a case of tuberculous kidney

with buchu and paregoric with creosote carbonate, and a case of Addison's disease with adrenal extract. A number of favorite prescriptions are given, some with from seven to ten components.

On the whole the *Clinical Medicine* is a very entertaining book, and is like a pleasant conversation with a wise and convincing man. It is a book of opinions rather than of proofs, and of sense rather than of science.

—HANSEN.

NEWS ITEMS

Dr. Darie Lemieux has moved from Dunseith, N. D., to Rolla, N. D.

Dr. Arthur Morrow, of Kalispell, Mont., died last month at the age of 54.

Dr. A. H. Parks, of Minneapolis, has received a captain's commission in the M. R. C.

The baby clinics continue in various villages of Minnesota, and are largely attended.

Dr. Charles J. Meade, of St. Paul, died on Aug. 22d at the age of 48 of angina pectoris.

Major A. S. Clark is the new commandant of the U. S. Army Hospital at Fort Snelling.

Dr. M. C. Johnston, of Aberdeen, S. D., has received his commission as captain in the M. R. C.

Great Falls, Montana, will probably build a detention hospital for patients with venereal diseases.

The Minnesota Public Health Association is planning to enroll 300,000 children as crusaders for health.

The plans for a new hospital at Madison, S. D., are progressing rapidly, and construction will soon be begun.

Maternity Hospital of Minneapolis is planning a "Dollar" campaign in the city with a view to raising \$5,000.

The four-story addition to the McKenman hospital of Sioux Falls, S. D., will cost \$160,000, and work upon it begins this week.

Dr. H. E. Nelson has been appointed health officer of Crookston in place of Dr. W. H. Daniels, who resigned when he entered the M. R. C.

Dr. Nap Chagnon, of Dayton, has moved to Bricelyn, to take up the work left by the village's only two doctors, who have entered the M. R. C.

Dr. W. E. White, of Winsted, will take over the practice of Dr. A. G. Moffatt, of Howard Lake, who left for Fort Sheridan, Alabama, last week.

Dr. E. V. Eyman, of Madison, has passed his examination for the department of psychiatry in the M. R. C., and expects an early call to service.

Dr. G. M. Lisor, of the Illinois State Hospital at Elgin, Ill., has moved to St. James (Minn.) and become superintendent of the St. James Hospital.

In a short "drive" for the enlistment of nurses, carried on in Fargo, N. D., 73 young women, more than half of whom were residents of Fargo, were obtained.

Reports of good work done by visiting nurses in Minnesota come from all directions, and the work is arousing the public to the value of public-health work.

Upon the departure of Dr. A. J. Rudolph, of Waseca, for war service, last month, his friends gave him a beautiful K. of C. emblem ring as an expression of their esteem.

St. Paul has a case of leprosy, an Italian, a single man. The City Health Officer will build or buy a cottage for him, and keep him in isolation, taking perfect care of him.

The recent War Department order suspending volunteering in the Army and Navy, does not apply to the medical service, for physicians are obtained in no other way than by volunteering.

Dr. David E. McBroom, after practicing several years at Adams, has sold his practice to Dr. R. E. Sutton, who formerly practiced in South Dakota. Dr. McBroom will take up Red Cross work.

The people of Adrian gave Lieut. A. W. Arnold a farewell banquet last week, and complimented him highly as a man whose loyalty has been "100 per cent plus" from the beginning of the war.

The Choral Union of Albert Lea celebrated in a service of song the departure of Dr. J. R. Nannestad of that city, and gave him tokens of remembrance in the form of cigars, a flash-light, and a fountain-pen.

A farewell reception was given last week to Capt. Jules Gendron, of Grand Rapids, on the eve of his departure for Fort Oglethorpe, Ga. Prominent citizens made speeches, all speaking appreciative words of Capt. Gendron.

A detention home for women afflicted with a venereal disease is planned for Minneapolis by the Social Hygiene Commission, together with a

clinic to be conducted five nights in the week for both men and women so afflicted.

Young women in Minnesota who wish to tender their services as nurses abroad should be strongly advised by physicians to correspond with Miss Lydia H. Keller, Secretary of the State Board of Examiners of Nurses, St. Paul.

The *Times*, of Thief River Falls, publishes the names of all who have entered the city's new hospital for medical treatment. May not this be a good way to popularize a hospital, and to form the hospital habit, in the interest of public welfare?

The State Sanatorium, near Walker, of which Dr. P. M. Hall, of Minneapolis, is the new head, will ask the next legislature for a new building in which to house and treat advanced cases of tuberculosis. There are now over two hundred patients in the Sanatorium.

The Minnesota State Board of Examiners for Nurses now has an office in the old Capitol Building, St. Paul, and will maintain the usual regular office hours, which means greater efficiency in the Board's work and closer touch with both nurses and physicians.

The conference of superintendents of nurses' training-schools and hospitals, held last month, at Missoula, Mont., had an attendance of twenty, which was large for these times. The conference was a purely educational one to consider the best methods of training nurses.

A farewell reception was given to Dr. J. A. Gates, of Kenyon, last month, who left for Fort Riley. Such honors are due to every man who, after serving a community in an honorable manner as a physician, volunteers for a great service in behalf of that community at large personal sacrifice.

The Crow Wing-Aitkin Sanatorium for tuberculous patients, located near Deerwood, was opened last month. It has beds for twenty patients. Dr. H. F. Gammon, of Massachusetts, is the medical director of the Sanatorium. Drs. J. A. Thabes and Walter Courtney are on the board of directors.

Minneapolis had the following number of deaths in the past four months: April, 584; May, 439; June, 300; July, 296. As August will probably show a still smaller number, the wags of the press are asking to what extent this rapidly progressive rate downward is due to the departure of physicians, in a monthly inverse ratio, from the city.

Major Emil S. Geist, of Minneapolis, has been honorably discharged from the Medical Reserve Corps without assignment of cause for such removal. Feeling that no just cause existed for this action, Major Geist will probably apply for reinstatement. Lieut. Justus Ohage, Jr., of St. Paul, was also honorably discharged at the same time and without assignment of cause.

The American Red Cross is in need for foreign service of additional physicians, especially in the three branches of general practice, pediatrics, and tuberculosis work. Any regular physician over draft age, or with some obvious physical impairment, if within draft ages, can obtain information by addressing the Medical Advisor, Northern Division, American Red Cross, Minneapolis.

Dr. W. B. Roberts, of Minneapolis, has organized the medical and nursing personnel of a naval base hospital for service with the Navy, afloat or ashore, domestic or foreign, during the period of the war. He has been commissioned in the N. R. F. with the title of surgeon and rank of lieutenant commander. He is subject to orders to report at any time to the Naval Medical School at Washington for training.

The Lake Preston District Medical Society of South Dakota has been divided into two societies in accordance with permission granted by the State Association. The new society, known as the Madison Third District Society, was organized last month with the following officers: President, Dr. T. B. Green, Brookings; vice-president, Dr. H. H. Frudenberg, Madison; secretary, Dr. J. C. Baker, Ramona; censors,—Dr. R. S. Westaby, Madison, Dr. C. R. Hovde, Madison, and Dr. J. F. Barthell, Winfred; councilor, Dr. N. K. Hopkins, Arlington. The membership of the new society is 21.

The American Red Cross is making an effort to find a physician who will undertake first-aid work in the Northern Division. Such a physician will be employed by the Red Cross with a salary of \$150 per month for the first six months, and \$2,000 a year after that if satisfactory service is given; and, in addition, all expenses are to be covered while travelling in the service of the Red Cross. A man is desired who is capable of making an effective, forceful address, with good personality, preferably a man who has had some practical experience with first-aid work. Address communications to the Medical Advisor, Northern Division, American Red Cross, Minneapolis.

PHYSICIANS LICENSED TO PRACTICE IN MINNESOTA AT THE

June (1918)

EXAMINATION

UPON EXAMINATION

Anderson, Hilding C.	U. of Minn., 1918
Broker, Walter S.	U. of Minn., 1918
Buscher, Herbert H.	U. of Minn., 1918
Calkins, LeRoy A.	U. of Minn., 1918
Cole, Wyman C.	U. of Minn., 1918
Eager, Ben F.	Northwestern, 1918
Fineman, Solomon	U. of Minn., 1918
Fjellman, Ruben C.	U. of Minn., 1918
Giere, Silas Waldemar.	U. of Minn., 1918
Gilles, Floyd Lester.	Syracuse U., 1917
Gillmore, Ernest G.	Syracuse U., 1917
Hathaway, Stillman J.	U. of Minn., 1918
Herrmann, Edgar T.	U. of Minn., 1918
Hocum, Harold E.	U. of Ill., 1918
Holm, Hillard H.	U. of Minn., 1918
Larson, Arnold	U. of Minn., 1918
Lick, Charles L.	U. of Minn., 1918
Little, Roy C.	U. of Minn., 1918
Logeheil, Rudolph C.	U. of Minn., 1918
Lund, Theodore C.	U. of Minn., 1918
McGeary, George E.	U. of Minn., 1918
McKinley, John C.	U. of Minn., 1918
Manitoff, Anna R.	Boston U., 1915
Morrissey, Frank B.	U. of Minn., 1918
Mulder, John L.	U. of Minn., 1918
Nathanson, Morris	U. of Minn., 1918
Pederson, Nellie C. E.	U. of Minn., 1918
Perkins, John N.	U. of Minn., 1918
Peyton, William T.	U. of Minn., 1918
Radusch, Freida J.	U. of Minn., 1918
Roholt, Christian L.	U. of Minn., 1918
Rummerstrom, George E.	U. of Minn., 1918
Rutledge, Lloyd H.	U. of Minn., 1918
Schwartz, Virgil J.	U. of Minn., 1918
Slater, Edward P.	U. of Minn., 1918
Stenberg, Edwin S.	Jefferson, 1917
Timm, John A.	U. of Minn., 1918
Wallinga, John H.	U. of Minn., 1918
Weisman, Samuel A.	U. of Minn., 1918
Ylvisaker, Laurits S.	U. of Minn., 1918
Zierold, Arthur A.	U. of Minn., 1918

BY RECIPROCITY

Broders, Albert C.	Med. Col. of Va., 1910
Furman, Raymond W.	Northwestern, 1909
Kistler, Alvin J.	Marquette, 1915
Logan, Fred W.	U. of Iowa, 1901
Lyons, Michael W.	Milwaukee Med. Col., 1911
Rawlings, Harvey F.	U. of Louisville, 1910

RECENT NEW ASSIGNMENTS OF NORTH-WESTERN MEDICAL OFFICERS

Minnesota—

To Camp Dodge, Iowa: Capt. A. T. Mann, Minneapolis; Lieut. T. Gratzek, St. Paul.

To Camp Grant, Ill.: Capt. S. C. Schmitt, Minneapolis; Capt. M. M. Ghent, St. Paul; Lieut. J. A. Dahl, Minneapolis.

To Camp Custer, Mich.: Capt. M. W. Smith, Red Wing; Capt. W. E. Richardson, Slayton; Lieut. L. W. Anderson, Atwater.

To Scott Field, Ill.: Capt. G. T. Ayres, Ely.

To Camp Gordon, Ga.: Lieut. W. I. Kremer, Minneapolis.

To Fort Oglethorpe, Ga.: Major A. R. Colvin and Lieut. C. E. Krugmeier, St. Paul; Capt. C. A. Lester, Winona; Lieuts. J. R. Hannestad and G. McCreight, Albert Lea; Lieut. E. D. Swanson, Brainerd; Lieut. G. W. Dahlquist, Lancaster; Lieuts. F. L. Gilles and E. G. Gilmore, Minneapolis; Lieut. C. C. Hoke, Rochester; Lieut. A. W. Drew, Swanville.

To Camp Devens, Mass.: Lieut. O. A. Groeber, Minneapolis.

To Fort Riley, Kas.: Lieuts. G. L. Merkert, D. A. MacDonald, and F. T. Cavanor, Minneapolis; Capt. A. J. Rudolf, Waseca; Capt. J. R. Freeman, Glenville; Capt. C. C. Walker, Lambertson; Capt. C. L. Warren, Le Roy; Capt. J. V. Johnson, New Duluth; Capt. M. J. Kern, St. Cloud; Lieut. E. W. Arnold, Adrian; Lieut. F. W. Davis, Alden; Lieut. H. J. Shelver, Appleton; Lieut. G. J. Dierkes, Foley; Lieut. F. J. Schatz, Rosemont; Lieut. L. J. Holmberg, Canby; Lieut. A. M. Crandall, Fairfax.

To Hot Springs, Ark.: Lieut. F. P. Frisch, Kimball.

To Camp Greene, N. C.: Lieut. R. B. J. Schoch, St. Paul; Lieut. A. E. Amundson, Oslo.

To Camp Sevier, S. C.: Capt. H. L. Ulrich, Minneapolis.

To Camp Shelby, Miss.: Capt. A. E. Benjamin, Minneapolis; Lieut. P. E. Stangl, St. Cloud.

To Rockefeller Institute, N. Y.: Lieut. H. H. Warner, St. Paul.

To Camp Devens, Mass.: Lieut. O. A. Groeber, Minneapolis.

To Camp Travis, Texas: Lieut. F. J. Traxler, Henderson.

To New Haven, Conn.: Capt. J. M. Conroy, Nopeming.

To Commanding General, Central Dept.: Capt. I. McC. Roadman, Cammia. Capt. J. D. Weir, Beardsley; Capt. A. D. Moffatt, Howard Lake.

Montana—

To Fort Riley, Kas.: Capt. R. E. Seitz, Bozeman; Capt. A. N. Currie, Nashua; Lieuts. J. E. Stuart and F. C. Vicars, Livingston; Lieut. J. R. McDowell, Wibaux; Lieuts. F. Lackner and C. T. Pigot, Roundup.

To Camp Lewis, Wash.: Capt. T. W. Welsh, Roundup; Lieut. L. P. Gaertner, Three Forks.

To Camp McArthur, Texas: Lieut. W. O. Ungherini, Butte.

To Camp Grant, Ill.: Capt. E. W. Thuerer, Billings.

To New York City (Neurological Institute): Lieut. A. G. Biddle, Butte.

To Fort Oglethorpe, Ga.: Capt. T. B. Marquis, Livingston.

North Dakota—

To Fort Riley, Kas.: Lieut. W. E. Wilson, Grand Forks.

To Fort Oglethorpe, Ga.: Capt. G. P. Shepard, Jamestown; Lieut. J. B. Tyrrell, Underwood.

South Dakota—

To Camp Pike, Ark.: Capt. B. A. Bobb, Mitchell.

To Fort Oglethorpe, Ga.: Capt. S. M. Hohf, Yankton; Lieut. F. D. Gillis, Mitchell.

To Fort Riley, Kas.: Capt. H. A. Gueffroy, Frankfort; Lieut. W. W. Stevenson, Vermilion; Lieuts. R. B. Flegger, and I. J. Markel, Lead.

To Camp Custer, Mich.: Lieut. F. W. Fletcher, Tnydall.

To Camp Dodge, Iowa: Lieut. H. L. Crane, Lead.

To Camp Grant, Ill.: Capt. F. E. Clough, Lead; Lieut. T. J. Devereaux, Aberdeen; Lieut. V. R. Hodges, Terry.

To Camp Sherman, Ohio: Capt. C. F. Culver, Sioux Falls.

TRANSFERS

MINNESOTA OFFICERS

Capt. A. S. Hamilton, Minneapolis, from the Surgeon General's Office to Mineola, L. I., N. Y.

Lieut. P. Blanco, Rochester, from Army Medical School to New York City.

Lieut. B. T. Bottelfson, Halstad, from Chicago to Army Medical School.

Lieut. W. H. Halloran, St. Paul, from Chicago to Camp A. A. Humphreys, Va.

Capt. W. F. Plumley, Rochester, from Camp Wadsworth, S. C., to Camp Bowie, Texas.

Lieut. M. C. Piper, Sanborn, from Camp Dodge, Iowa, to Camp Custer, Mich.

Lieut. O. L. Winter, St. Paul, from Fort Riley, Kas., to Camp Gordon, Ga.

Lieut. D. F. McKann, Bemidji, from Camp Dodge, Iowa, to Camp Grant, Ill.

Lieut. N. P. Anderson, Dunnell, from Portland, Ore., to Camp Kearney, Calif.

Lieut. G. B. Lynch, Winona, from Fort Oglethorpe, Ga., to Camp Lee, Va.

Lieut. R. S. Forbes, Duluth, from Fort Oglethorpe, Ga., to Camp Pike, Ark.

Capt. I. R. Maercklein, Renville, from Camp Grant, Ill., to Fort Des Moines, Iowa.

Major W. M. Chowning, Minneapolis, from Washington, D. C., to Fort McPherson, Ga.

Lieut. L. H. Redelings, Rochester, from Camp Upton, N. Y., to Hoboken, N. J.

Lieut. B. N. Sorose, Detroit, from Fort Oglethorpe, Ga., to Hoboken, N. J.

Lieut. W. J. Kucers, Hutchinson, from Fort Riley, Kas., to Fort Sam Houston, Texas.

Lieut. R. N. Jones, Minneapolis, from Camp Colt to Hot Springs, Ark.

Capt. C. R. Christenson, Starbuck, from Camp Custer, Mich., to New Haven, Conn.

Major C. H. Clark, Duluth, from Camp Custer, Mich., to Rock Island, Ill.

Lieut. A. F. Strickler, Sleepy Eye, from Camp Kearney, Calif., to San Francisco, Calif.

Capt. J. W. Daniels, St. Peter, from Camp Dodge, Iowa, to Whipple Barracks, Ariz.

MONTANA OFFICERS

Lieut. J. D. Hobson, Missoula, from Fort Riley, Kas., to New Haven, Conn.

NORTH DAKOTA OFFICERS

Lieut. J. R. Mackenzie, Carrington, from Camp Dodge, Iowa, to Camp Custer, Mich.

Lieut. G. V. Jamieson, Devils Lake, from Camp Beauregard, La., to Camp Dodge, Iowa.

Lieut. J. A. D. Engesather, Brocket, from New York City to Camp McClellan, Ala.

Lieut. J. R. Brenckle, Kulm, from Camp Douglas, Ill., to Camp Pike, Ark.

Capt. R. D. Campbell, Grand Forks, from Camp Grant, Ill., to Fort Des Moines, Iowa.

Capt. O. M. McClusky, Carrington, from Fort Riley, Kas., to Rochester, Minn. (Mayo Clinic).

SOUTH DAKOTA OFFICERS

Lieut. A. V. Elliott, Beresford, from Camp Custer, Mich., to Biltmore, N. C.

Capt. J. F. Adams, Aberdeen, from Camp Grant, Ill., to Fort Riley, Kas.

Lieut. A. P. Kimball, Colome, from Camp Travis, Texas, to Fort Riley, Kas.

Major J. A. Mattison, Hot Springs, from Camp Grant, Ill., to Camp Wheeler, Ga.

Lieut. C. N. Harris, Wilmot, from Camp Custer, to Fort Des Moines, Iowa.

COMMISSIONS ACCEPTED IN THE M. R. C.

BY MINNESOTA PHYSICIANS

Dr. R. T. Adams, Mantorville; Dr. F. T. Cavanor, Minneapolis; Dr. J. A. Dahl, Minneapolis; Dr. J. P. Freeman, Duluth; Dr. A. Guillixson, Briceyn; Dr. A. W. Hilger, St. Paul; Dr. F. E. Kunce, St. Paul; Dr. N. L. Linneman, Duluth; Dr. F. L. Parsons, Mt. Iron; Dr. B. Ravn, Windom; Drs. L. H. and S. G. Schmidt, Minneapolis; Dr. A. W. Shaleen, Hallock; Dr. H. L. Ulrich, Minneapolis; Dr. C. L. Warren, Le Roy; Dr. J. D. Weir, Beardsley.

BY MONTANA PHYSICIANS

Dr. G. Biddle, Butte; Dr. G. A. Lewis, Roundup.

BY NORTH DAKOTA PHYSICIANS

Dr. Alfred Dean, Grand Forks; Dr. L. G. Dunlap, Bismarck; Dr. T. O. E. Moeller, Devils Lake; Dr. R. A. Scott, Crystal.

BY SOUTH DAKOTA PHYSICIANS

Dr. W. A. Bates, Northville; Dr. F. E. Clough, Lead; Dr. C. F. Culver, Sioux Falls; Dr. S. A. Donahoe, Sioux Falls; Dr. F. D. Gillis, Mitchell; Dr. S. M. Hohf, Yankton. Dr. A. S. Jackson and Dr. I. J. Markel, Lead.

STOCK FOR SALE

Ten shares of common and 10 shares of preferred Standard Medical Supply Company stock for \$900 cash if taken at once. Address 143, care of this office.

LOCUM TENENS WANTED

Locum tenens wanted for period of three or four weeks beginning September fifth. General country practice in a small town seventy-five miles from the Twin Cities. Will pay cash or give percentage. Address 144, care of this office.

PHYSICIAN WANTED

A physician is wanted in a town of 450, situated in a rich wheat country on the Red River. Nearest physicians 17 miles east and 17 miles west and 22 miles south. Our physician left to join the Medical Reserve Corps two weeks ago. Address 145, care of this office.

OFFICE FOR RENT AND EQUIPMENT FOR SALE

Suite of four rooms. X-ray machine, etc. Will go into army. Practice of about \$6,000 per year. Town of 20,000. Address 142, care of this office.

ASSISTANT WANTED

A Scandinavian physician (draft exempt) as assistant in a large surgical and general practice; good income, with permanency for one qualified. Must be good mixer and worker. State full particulars; begin in four weeks. Address 141, care of this office.

For Circumcision

we offer a special catgut suture not only particularly suitable for the purpose, but one that is exceptionally convenient and safe.



Sizes 00 and 0, Three Tubes in a Box. Price, 25 cents per tube.
No samples.

OBTAINABLE FROM YOUR DEALER

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

"Sick Headache"

—and other headaches—

are usually relieved more or less promptly as you remove their cause. In the meantime—

K-Y ANALGESIC

locally "rubbed in," will usually afford comfort without blistering or soiling.

Gives Nature's Corrective Forces a Chance

No fat or grease. Samples and literature on request.

Water-soluble. Collapsible tubes, druggists, 50c.



Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Chafing, Sunburn, Prickly Heat

—and similar afflictions—

are promptly relieved by

K-Y Lubricating Jelly.

Applied liberally to irritated or inflamed areas, the pronounced cooling and soothing action of this effective local remedy is at once manifest.



Water-soluble; non-greasy; "smells nice".

Collapsible tubes at Druggists.

Samples and literature to physicians only.

K-Y Lubricating Jelly

"Stops the itch
without greasing the linen."

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Paraffin Treatment of Burns

is successfully applied
by the use of

REDINTOL

Made from carefully selected ingredients of the highest quality, and combined in proportions to insure the most satisfactory results, Redintol makes possible the ready application of the newest and most effective method of treating burns, even of the most severe degree.

Redintol is a plastic and elastic dressing which forms an occlusive, non-adhering covering to the injured area. It can be applied with practically no pain and affords immediate relief from burning and smarting.

Redintol promotes rapid healing, with minimum scarring and lessened contractions of the skin or tendons.

Redintol is supplied in individual packets, ready for immediate application.

Sample and Full Directions on Request.

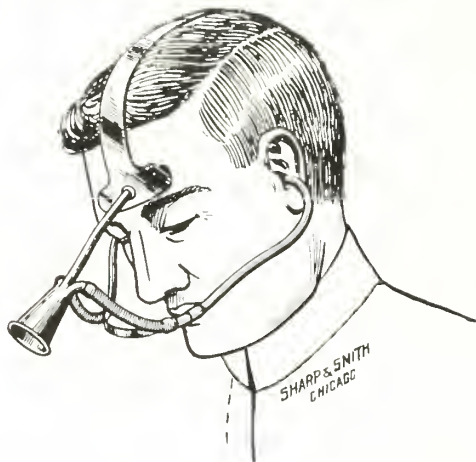
Johnson & Johnson

New Brunswick, N. J.

U. S. A.

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

65 East Lake St. - - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological

Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aenaerobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or

Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.

5 S. Wabash Ave.

ST. LOUIS, MO.

4485 Olive St.—Corner Taylor

NEW YORK, N. Y.

18 E. 41st St.

PUBLISHER'S DEPARTMENT

E. R. SQUIBB & SONS

Any product offered the medical profession by Messrs. E. R. Squibb & Sons carries the guarantee of an honorable name which may be taken as the best evidence that such product is all that is claimed for it, and especially that perfection in its manufacture and honesty of opinion in its recommendation characterize it.

More than the above can neither be expected nor obtained from a manufacturer of pharmaceuticals.

THE MINNEAPOLIS SANITARIUM

The above-named home-like sanitarium has been under the management of Dr. R. M. Peters as medical director and Mr. J. J. Baker as manager for a good many years, and its clientele of drug and alcoholic addicts are almost exclusively referred patients, who are sent by medical men of the highest standing in both the Twin Cities and the entire Northwest. The sanitarium has thus been under the daily scrutiny of men who know by personal observation how cases are handled, and the endorsement of their long-continued patronage excels all other endorsements.

THE WINCKLEY LIMB CO.

The Winckley artificial limbs have been for over a third of a century somewhat better than the best, and very much superior to the average, artificial limbs made anywhere else in the world. This is largely due to the fact that they have been made all that time under the supervision of one man, the head of the company, who is a broad-minded, cultured, public-spirited, and thoroughly honest man—Mr. Lowell E. Jepson.

While the fundamental principle of the action of the Winckley limb is the same as it was the day of its invention, the refinement of its manufacture has steadily increased until now it is well-nigh like a natural limb. It simply has no superior.

The large new illustrated catalogue of the Company will be sent, postpaid, to any physician.

REED & CARNRICK

Among a comparatively small list of firms that have maintained the confidence of the medical profession in all parts of America for a generation or more is the firm of Reed & Carnrick. Their products put before the profession in the past quarter of a century or more have been few in number, but uniformly excellent in quality.

The laboratory investigators and the manufacturing chemists in America, as well as in Germany, have taken a large part in the medical progress of the past few decades; and the men engaged in these lines of work who have been in close touch with both general and special practitioners, and have worked with such professional men in a common aim, that is, the advancement of therapeutical knowledge, will ever deserve the thanks of both the layman and the medical man.

We believe such a firm is found in Reed & Carnrick.

THE METROPOLITAN MILK CO

The food situation in these days of limited supplies has produced in the American people a keen desire to learn something about food values, to use such information for the benefit of the people abroad whom America must help to feed for many years to come. The single greatest thing to learn is the food value of milk, not only the cheapest, but the best, food obtainable in practically unlimited quantities.

The next thing in importance to learn is the absolute necessity of scientific handling of this food between the cow and the consumer when the cow is on the farm and the consumer is in the city. The lesson learned by the present generation which solves this problem is the lesson of efficient organization, and of doing a big job on a big scale. The need for this solution of the plain problem of milk supply developed the Metropolitan Milk Company of Minneapolis, which is regulated by wise state and municipal laws, now cheerfully, as we believe, observed by this organization. All doctors should know these facts.

HIGH-PRESSURE STERILIZERS

The need for sterilizing apparatus has become so nearly universal in physicians' offices that a highly-efficient apparatus selling at a moderate price can now be had. Such a product has been put upon the market by a Minnesota concern of high standing and unquestioned financial responsibility, thus guaranteeing excellence of workmanship and dependability as to claims made.

The Northwestern Steel & Iron Works of Eau Claire, Wis., manufacture high-pressure sterilizers that sell for \$60, \$85, and \$145, thus meeting the needs of the private office and the largest hospital. These sterilizers create a heat from 112 to 224 degrees, and do their work in about half the usual time. The dressing are dry and ready to use as they come from the apparatus.

Each sterilizer is complete, and is ready for immediate use. They are to be found in over two thousand hospitals, sanitariums, and private offices, besides in the army and Red Cross hospitals.

They are sold by all physicians' supply houses, and are sold on approval.

THE JORDAN SULPHUR SPRINGS AND MUD BATH SANITARIUM

Sulphur springs and the mud baths are not a cure-all, but this treatment, with its eliminative process, its rest to the patient who turns from his business for even a brief time, and its unquestioned therapeutic quality, gives relief, if not complete cure, in so many cases of so-called rheumatism, dyspepsia, constipation, and the long line of ailments arising from faults of living, that it cannot be ignored by medical men.

The above-named sanitarium, under the management of Mr. J. J. Leonard, has gradually grown since the day it opened, a number of years ago, until it has become a large institution, recognized at its true worth by medical men and largely patronized by them, who know for what class of cases the treatment is helpful.

N. E. Atkinson, M. D., is the medical attendant, and is a thoroughly reliable physician of excellent attainments and high standing in the profession.

Jordan, the home of the institution, is only a short ride from the Twin Cities, and is located in the charming valley of the Minnesota river.

ONE TYPE ONLY OF DIPHTHERIA ANTITOXIN

It has long been the custom of manufacturers of biologicals to offer two types of packages of diphtheria antitoxin: the "Regular" and the "Board of Health" packages. It is, therefore, of considerable interest to our readers that one of the large biological concerns—Eli Lilly & Company, of Indianapolis—announces, elsewhere in this issue, that it supplies but one type of package of diphtheria antitoxin and that at an attractive price.

The Lilly antitoxin, according to good authority, is a purified, highly concentrated product, only the globulins containing the antitoxic bodies being used. Excess protein is, therefore, eliminated and the volume of the solution is reduced, thus insuring minimum danger of anaphylactic reactions and discomforts from injections.

The announcement of the intention of Eli Lilly & Company to supply but one package at an attractive price will undoubtedly be welcomed by the medical profession. The specificity of diphtheria antitoxin is definitely established, and it is being relied upon unreservedly. The ease with which the Lilly product can be secured through the drug trade, from stocks kept under proper storage conditions, together with the fine reputation for quality enjoyed by this company, should do much to increase the use of Diphtheria Antitoxin, Lilly.

INSTRUCTION IN X-RAY WORK

Physicians of the Northwest interested in x-ray work were given the unusual opportunity recently of attending an institute conducted by Professor Ed C. Jerman on practical x-ray technic.

Three classes were held, each lasting five full days, as follows: the first in the x-ray laboratory of Drs. Stevens and Perkins in Sioux Falls, S. D., the week of July 8-12, inclusive; the second, in the salesrooms of the Victor Electric Corporation in Minneapolis the week of July 15-22; and the third in the x-ray laboratory of Drs. Darrow and Weible, in Fargo, N. D., July 22-26.

Nearly 100 physicians and technicians attended these classes; 48 were enrolled in the Minneapolis class alone, besides a number of visitors. The class was taught how to test the apparatus, the x-ray tube and x-ray plates, and how to detect the various kinds of fog and stains, the cause of them, and how to prevent them.

Pictures were made by the class of every part of the anatomy, including the viscera. Each member kept a record on printed sheets, provided for the purpose, of all work done. The record sheet, when completed, gave regions, anatomical landmarks, rheostat button, auto-transformer button, spark back-up, distance, and length of exposure for every part to be rayed.

Professor Jerman has been actively interested in x-ray work for twenty-six years, being one of the charter members of the American Röntgen Ray Society, and is one of the best qualified men in this country on Röntgen technic.

To show their appreciation, the members of the Minneapolis class provided a bountiful banquet at the Hotel Rogers Cafe, and extended a vote of thanks to Professor Jerman and to Mr. F. L. Pengelly, Northwestern Sales and Service Distributor for the Victor Electric Corporation, who organized the class.

Bayer-Tablets

AND

Bayer-Capsules

OF

ASPIRIN

(5 grs. each)

CONTAIN THE ORIGINAL PRODUCT

Made in the United States since 1904

The trademark "Aspirin" (Reg. U. S. Pat. Office) is a guarantee that the monoaceticacidester of salicylicacid in these tablets and capsules is of the reliable Bayer manufacture.

THE JOURNAL-~~L~~ANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, SEPTEMBER 15, 1918

No. 18

MECHANICAL DERANGEMENT OF THE KNEE-JOINT*

By M. S. HENDERSON, M. D.
Mayo Clinic

ROCHESTER, MINNESOTA

The knee-joint is the largest joint in the body, and, when considered from a purely mechanical point of view, would appear to be too weak and unstable to carry out its function. This apparent weakness is owing to the structure of the bony parts; the strength is furnished by the ingenious short, strong ligaments, augmented to some extent by the insertion of the muscles into the ends of the bone comprising the joint. If the knee were called upon merely to support weight, the problem nature is confronted with would be simple, but, in order that man may walk, motion must be permitted. This means that the various ligaments entering into the structure of the joint must be so arranged that, when one is relaxed by a certain motion, another will tighten to give the necessary stability.

The knee is a specialized hinge-joint, and would have a mobility of 180 degrees if flexion were not stopped by the impingement of the calf on the thigh. Normally, with the knee extended, there is no lateral mobility or rotation permitted. Occasionally a person is seen who has some lateral motion with the knee fully extended. This stability lessens as the knee is flexed, and lateral motion and rotation begin at a flexion of 150 degrees and increase as flexion increases. Morris states that a rotation of 36 degrees thus becomes possible, which is extremely important because damage to the semilunar cartilages occurs when this "arc of weakness" is entered.

*Presented before the South Dakota State Medical Association, Mitchell, May 21-23, 1918.

The capsule surrounds the joint, and specialized parts of it are called ligaments. At the front is the patellar ligament arising from the tibial tubercle and the lower end of the patella, the latter merely a sesamoid bone in the tendon of the quadriceps. The capsule extends above the top of the patella for two inches or more, forming the suprapatellar pouch. On the inner side is placed the internal lateral ligament, a broad fan-shaped structure with the base upward, really a thickened portion of the capsule and not readily distinguishable from it. That the internal semilunar cartilage is very intimately associated with the ligament by the strong fibres of its deep layer is a fact of practical importance. (Fig. 1.) On the outer side is placed the external lateral ligament, a structure more deserving of the name of ligament; and it is oftentimes in two distinct parts. This ligament is separated from the true capsule by fatty tissue; and the popliteus tendon lies between it and the bone. It arises from the external tuberosity of the femur, runs down, and is inserted into the head of the fibula, piercing the tendon of the biceps. The external semilunar cartilage has not the same intimate connection with the ligament that its companion on the inner side has. (Fig. 1.) Posteriorly, the capsule is reinforced by a strong band of ligamentous tissue, known as Winslow's ligament. It is of no special significance to the topic under discussion, except that it has to be divided when exploring the posterior compartment of the joint.

The semilunar cartilages are crescent-shaped structures, fibrocartilaginous in consistency. They are wedge-shaped in cross-section, the thicker part being at the periphery of the joint and attached more or less firmly to the capsule. The thin portion points to the inner part of the joint, is free, and can be lifted from the articular surface of the tibia. The external cartilage is almost circular, the narrow ends being attached in front of and behind the fibular facet of the tibial spine. The internal cartilage does not form such a complete circle. Furthermore, the anterior extremity is more or less loosely inserted into the rough surface near the anterior border, a matter of significance in considering the great frequency with which trauma is inflicted on the internal semilunar cartilage. Nature has at-

tremity to be caught between the bone-ends on attempted extension. The crucial ligaments are situated well inside the joint. The anterior, or external, arises from in front of the tibial spine, and passes outward, upward, and backward to be inserted into the internal posterior surface of the external condyle. The posterior or internal ligament arises from in back of the tibial spine, and passes upward, forward, and inward to be inserted into the anterior end of the external surface of the internal condyle. The anterior prevents the slipping forward of the tibia on the femur, and the posterior prevents the backward slipping.

Below the patella is a fat pad extending under the upper portion of the ligamentum patellæ. Passing up from this pad to the intercondyloid notch is the ligamentum mucosum. Below, it is continuous with the synovial fringes at each side of the lower margin of the patella, which forms the ligamentum alare. Davis has suggested that these ligaments perform the function of "wipers" for the knee-joint, spreading the synovial fluid over the condyles as motion takes place.

Mechanical derangement of the knee-joint is a term generally used to designate a clinical entity produced by intrinsic causes. The condition is due to some disarrangement of the internal structures of the joint, caused by injury of the joint surfaces, the semilunar cartilages, and the fat tags, or, if the term is broadly used, rupture of the crucial ligaments may be included. Occasionally in civil practice, the cause of the derangement may be found to be a body of extrinsic origin, such as a bullet. The great war has already furnished numerous instances of bullets loose in the joint. As a definite group, the causes of the derangement, as seen in cases in the Mayo Clinic, have been due, respectively, to the internal semilunar cartilage, loose osteocartilaginous bodies, the external semilunar cartilage, and foreign bodies. From January, 1910, to March, 1918, we have operated on 162 patients for derangement of the knee. The internal semilunar cartilage was removed in 96 instances; loose bodies, osteocartilaginous in structure, in 57; the external semilunar cartilage, in 5; and foreign bodies (extrinsic), in 4. In three instances the joint was opened, and, no pathologic condition being found, it was closed. In two of these cases a search was made for loose bodies.

tempted to remedy this somewhat weak insertion by providing a transverse ligament to join the two semilunar cartilages. The posterior end of the internal meniscus is attached to the back of the tibial facet of the spine and is firmly fixed. The firm attachment of the thickened convex border to the capsule and internal lateral ligament is of importance for the reason that any pull on the capsule tends to move the internal cartilage. Some fibres of the quadriceps are inserted rather low down on the inner side of the capsule, and this prolongation might pull in such a manner as to disturb the normal contour of the fibrocartilage, thus causing the anterior ex-

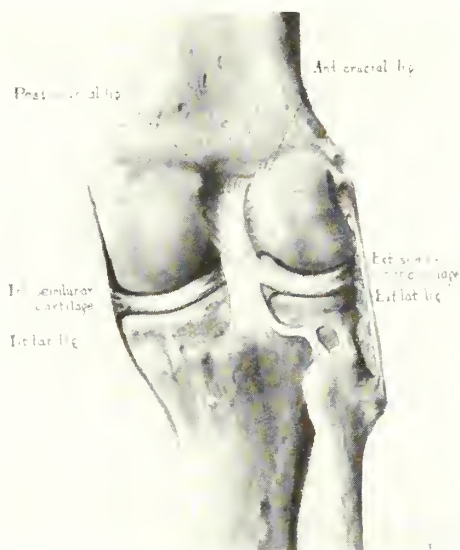


Fig. 1. Showing intimate relation of internal semilunar cartilage to internal lateral ligament and the lack of this relation of the external semilunar cartilage to the external lateral ligament.

The symptoms produced by a damaged loose or fractured internal semilunar cartilage are usually quite definite, and the diagnosis is corre-

spondingly easy. The history as to the exact method of the production of the injury is important. The syndrome is typical, although the accident may be so sudden, the actual duration so short, and the patient so confused that it is occasionally impossible to obtain a clear history. It is generally conceded that injury to the semilunar cartilages very rarely, if ever, occurs with the knee in full extension. Derangement of the cartilage is quite common among the coal-miners in England, caused, no doubt, by the position assumed by them in the low mining shaft, necessitating working with the knees partially flexed. In such a cramped position a man can usually better maintain his equilibrium by having the feet in moderate eversion. It is in just this position that the derangement is produced, namely, partial flexion of the knee with eversion of the foot, causing some rotation outward of the head of the tibia on the femur. As I have stated, there is, when the knee is slightly flexed, a certain laxity of the joint, permitting some lateral mobility and rotation. With the knee flexed to about 150 degrees, and the foot everted and rotated outward, the relaxed internal lateral ligament allows of some separation of the internal condyle from the internal tuberosity of the tibia. When the accident occurs and the force continues, with the foot in eversion, there is a tendency for the tibia to rotate outward on the femur, carrying with it the internal semilunar cartilage, and, as attempt is made to extend the knee, the internal condyle of the femur rolls down on the anterior extremity of the cartilage, and catches and holds it. Something must give way. The semilunar cartilage must slip from between the bones (the most fortunate thing that can happen), the applied force must stop in time (almost an impossibility), or the cartilage will be torn from its anterior attachment or fractured. The meniscus is fibrocartilaginous in structure, and very seldom tears completely in two. It may rip in a multitude of ways, perhaps the most common being a tearing free of the anterior third or fourth so that it lies loose, attached by a pedicle in the joint. Such an injury is followed by locking of the joint at intervals, causing various degrees of disability. If the rotation of the tibia on the femur is considerable at the time of the accident, the condyle of the femur may catch the cartilage farther back, and rip it longitudinally through the middle three-fifths. The outer piece of the cartilage will then be forced outward, and will lie to the outer side of the inner condyle near the crucial ligaments,

being still intact at the anterior and posterior fifths. (Fig. 2.)

The clinical history in such a case is usually that the disability following the accident is marked, the swelling and effusion persist for some time, but the dominant residual sign is lack of full extension. Flexion in such a case is usually normal, and there is seldom the recurring of the locking that is present in the case in which there is a loose anterior extremity or a loose body. The patient presents himself with some effusion in the knee-joint and lack of extension, and gives

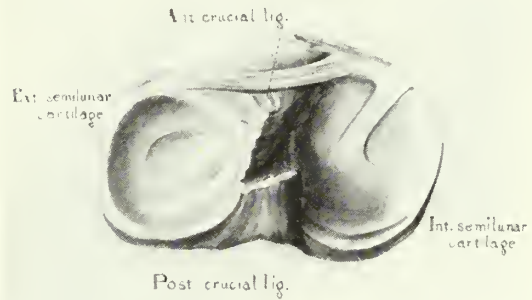


Fig. 2. Showing internal semilunar cartilage displaced outwardly; anterior portion blocking extension.

a history of a feeling of insecurity on walking that may necessitate crutches. The symptoms depend largely on the type of injury inflicted on the cartilage. If the history of locking is not definite or the physical signs, for example, lack of extension, are not definite, the surgeon should beware. Often the patient does not tell his story well, and it is only by carefully going over and weighing the details that a conclusion can be reached. It is interesting to note that in the armies at war, this train of symptoms is seized on by the slacker as a means of being invalided out of service; and only by the most careful investigation of the symptoms can it be ruled out. There may be such a laxity to the capsule in certain cases, in which the knee is partially flexed and the foot rotated outward, that the anterior portion of the internal meniscus will be caught on extension, and will slip out before serious damage is done. Pain, effusion, and disability will ensue. At operation, an almost normal looking cartilage may be shown with but a trifle too much mobility, such motion being participated in by the capsule in this area. In such a case,

removal of the anterior three-fifths of the meniscus affords relief.

It is generally conceded that the patient should not be operated on if there has been only one locking or derangement. This is particularly true if the semilunar cartilages are involved. It is probable that, if all derangements of the knee accompanied by locking were treated by reduction at the time of the accident, and followed by a plaster-of-Paris cast for from four to six weeks, there would be comparatively few recurrences. Unfortunately, this is not done, and the usual story is that there are repeated lockings following the accident, making surgical intervention necessary.

In cases in which there has been locking for years, the loose end of the cartilage may be palpable, and occasionally it has deposits of calcium in it sufficient to cast a shadow in the röntgenogram. As an aid to diagnosis of semilunar cartilage derangement, the röntgenogram is useful only in excluding loose osteocartilaginous bodies, but it should be employed in every case of knee-joint derangement. The semilunar cartilages are most frequently the cause of the disability in early adult life, although they are by no means limited to this period.

The external semilunar cartilage is much less frequently involved than the internal and there are very good reasons for this. The rotation and lateral mobility are less on the outer side, and the external meniscus is quite loosely attached to the capsule. Thus it is permitted more motion, and is able to glide out of harm's way. The shape, as has been mentioned, is different, as the anterior and posterior extremities nearly meet at the tibial spine, and the circle is practically complete. The internal meniscus is more C-shaped, the anterior extremity being loosely attached. In this series of 101 operations on the semilunar cartilage, the external was removed five times. In two of these, the results have been unsatisfactory; it is probable that that cartilage was not at fault, and we must acknowledge an error in diagnosis. Jones states that to eight internal semilunar cartilages at fault the external cartilage is at fault but once. Other authorities place the proportion anywhere from 10 to 1 to from 50 to 1. In this series, it is certainly no lower than 20 to 1. It, therefore, is clearly evident that an external semilunar should be removed only on a definite history of pain on the outer side of the joint, in conjunction with distinct locking. Jones has seen cases with derangement of the external semi-

lunar cartilage in which the pain was all referred to the inner side.

The removal of a damaged semilunar cartilage gives most excellent results. The technic employed must be rigidly aseptic; the operation is simplified by the use of the tourniquet. The type of incision used is the lateral, or so-called condylar, care being taken that the internal lateral ligament is not needlessly sacrificed. On the outer side, the external lateral ligament is placed more posteriorly and is readily avoided. While splitting the patella longitudinally gives better general inspection of the joint, it is not well adapted to the removal of the semilunar cartilages. The knee should be kept at absolute rest for one week after the operation, and this is best accomplished by a plaster-of-Paris cast. Some surgeons advise putting the patient in bed with merely a bandage about the knee, and encourage motion immediately. There are two objections to this: first, the patient on awakening from the anesthetic may move the leg too freely, and cause hemorrhage; second, it is much better to keep any wound at rest until the blood-clot has had time to partially organize. The superficial stitches may be removed at the expiration of a week, the deep sutures three days later, and the patient encouraged to get about on crutches, putting a little weight on the leg. Two weeks after operation he should be without support of any kind. A little effusion may follow, but, if the knee is banded, this will gradually subside. In three weeks the patient is usually fit for his work.

Loose bodies next to the internal semilunar cartilage in this group have been the most frequent cause of derangement. In a general classification of loose bodies, would be included the loose bodies of unorganized tissue, such as the corpora oryzoidea (rice-bodies), found in tuberculosis, but which never cause mechanical derangement. Occasionally a mechanical derangement may be due to a fibrous, pedunculated loose fat-tag. In no case in this series could this be definitely decided on as the sole cause. Fat-tags were removed in three cases in conjunction with the internal meniscus. Therefore, I shall discuss only loose bodies of definite structure, osteocartilaginous bodies, or those of foreign substance, such as a bullet or a needle, although the latter may be almost disregarded in this series, since there were but four, one bullet and three needles. The needles were not, strictly speaking, loose, one being in the soft tissues and the others in the cartilage of the internal condyle.

The osteocartilaginous bodies may be said to be produced in three ways, although trauma enters into the etiology in all. A loose body may be produced by direct trauma in a normal, healthy knee. A fall on the flexed knee against a hard object, such as a stone, may inflict such severe trauma to the internal condyle of the femur, the external condyle, or the patella, that a piece of the articular surface may be knocked off. In our experience, the internal condyle has been the most frequently involved in this manner. In one case suspicion seemed to point to the external condylar surface as the point of origin. In no case has the patella been the demonstrable origin. In our cases, syphilis, *per se*, has not been an etiologic factor. We have noted the presence of loose

from a sitting position on the ground. It is quite evident that the joint surfaces are not healthy in such cases. For some reason, desiccation of an area takes place, generally on the internal condyle a little to the inner side and just adjacent to the point at which the posterior crucial ligament is inserted. (Fig. 3.) König's theory was that the end artery supplying this area became plugged, and the part became under-nourished and sloughed off. In one instance a young man had recurrent locking. The röntgenogram showed the typical picture of osteochondritis dissecans, the body evidently resting in the depression where it originated. (Fig. 3.) On opening the joint, the area was readily distinguished, a line of demarcation could be traced surrounding



Fig. 3. Osteochondritis dissecans. Loose bodies arising from the internal condyle resting in the spot of its origin.



Fig. 4. Osteochondromatosis of the knee-joint in which the loose bodies originate from the synovial membrane.

bodies in certain Charcot knee-joints, but have not considered that they should be classified under mechanical derangements, and in this paper they are not taken into consideration.

There has been definitely established as a clinical entity a group of persons who are prone to produce loose bodies, in every instance in this series the internal condyle of the femur being the area responsible. König first described this condition, giving it the name of "osteochondritis dissecans," and in this country Freiburg and Wooley and Ridlon first drew our attention to it. In a few instances we have encountered it in both knees. The trauma or motion producing the body, or at least producing the first symptoms, is usually trivial and nothing particularly unusual, such as when the person turns sharply or arises

the body, the latter being about three-fourths inch in circumference. It was necessary to cut the body loose in order to remove it. Whether or not the body had ever been free was not definitely clear. It may have been previously hanging on a pedicle, have become lodged in the depression and fibres had formed about it to hold it there. My impression was that these thin adhesions were not strong enough to have held the body there indefinitely, and that it would later, on the infliction of some slight trauma, have become a loose body. The number of loose bodies produced in this way rarely exceeds two or three and careful inspection of the röntgenograms will disclose the source as a flattened area in the internal condyle.

The patient may present a knee actually distended with loose, movable osteocartilaginous bodies, which feel like a sack of marbles. The röntgenogram may show a synovial cavity greatly distended with a varying number of these bodies. (Fig. 4.) Bland Sutton reported one case in a young woman who had 1,047 bodies removed without a recurrence of symptoms. In one of our cases more than 200 were removed. Such a condition had best be described as osteochondromatosis. The röntgenograms show the joint lines to be clear, thus forcing us to look further for the cause. On opening the joint, the picture is unusual. There is an associated synovitis; and the lining is inflamed, somewhat thickened, and pedunculated into teats. These pedun-

the femur, and later became malignant, the patient becoming cachectic and dying with metastases in the lungs. (Fig. 5.) Such an association of growth on the synovia and in the cartilage is evidently rare, but very suggestive that the condition is a benign neoplastic one. Our patients with only the synovia involved have remained well; and in all the reported cases the patients have apparently had no recurrences. Just why the process should be brought to a standstill by the removal of the large formed bodies is difficult to understand; however, it is a clinical observation substantiated by but comparatively few cases.

The symptoms produced by the loose body or bodies are catching or locking, at irregular in-

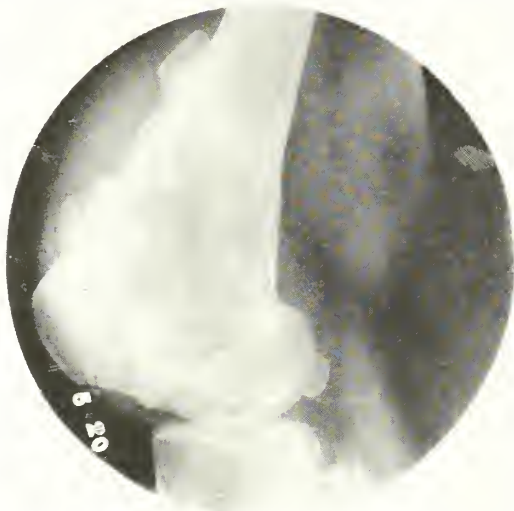


Fig. 5. Osteochondromatosis associated with a malignant tumor of the lower end of the femur (sarcoma), later causing death.



Fig. 6. Loose bodies due to osteophytic growths of hypertrophic arthritis.

culated masses vary in size; some are fibrous on the tip, while others, still more advanced, are cartilaginous, becoming bulbous. As these bulbous portions become gradually larger and heavier, they drop off, wander about the joint, and, nourished by the joint fluid, increase in size. What the etiologic factor back of this is, it is impossible definitely to determine. That it is of infectious origin does not seem reasonable. There are factors which suggest it to be of the order of new growth. The synovial membrane is developed from the same layer of mesial blastema as is the cartilage of the joint surfaces, and it has been suggested by Whitelocke that the synovia tends to take on cartilaginous structure. In one of our cases, this condition developed coincidentally with a chondromatous formation in the lower end of

tervals, associated with pain and perhaps effusion, followed by a period of relief depending on whether or not the body finds a resting-place that does not permit of its being caught between the articular surfaces. If it lies above the patella in the suprapatellar pouch, in the posterior compartment, or even in the intercondylar space, locking will be absent. The irregularity and uncertainty of the locking, producing pain and sudden disability sometimes so extreme that the patient may fall to the ground, causes him to seek relief. Effusion may be present, and hypertrophic arthritis, although whether the latter produces or is produced by the loose bodies, is not always definite. There is very little question, however, that some loose bodies are produced, particularly in elderly persons, by the marginal osteophytic

growths in marked cases of hypertrophic arthritis, breaking off and wandering about the joint and increasing in size. (Fig. 6.) Most probably the slight degree of hypertrophic arthritis seen in younger persons with loose bodies is secondary to the latter. It may be almost arbitrarily stated that the presence of loose bodies demands their removal, the general condition of the patient being taken into consideration.

If the loose bodies are single or only a few, and are in the suprapatellar pouch, they may ordinarily be removed under local anesthesia. The knee is carefully prepared, the skin and subcutaneous structures are anesthetized, and the loose body carefully palpated and held firmly between the fingers. A sharp cutting-needle is thrust through the skin directly into the body, thus fixing it securely. With a sharp knife, the dissection is carefully carried down to the body and it is removed. After this simple procedure, the patient may be permitted to walk the same day. When the body is situated in the middle of the joint, as definitely ascertained by the röntgenogram, usually in a notch or a depression in the internal condyle, the inner condylar incision, as used in the removal of the internal semilunar cartilage, may be employed. If, however, exploration of the entire anterior compartment is necessary, the patella should be split longitudinally, the fibres of the patellar ligament divided, and the fibres of the quadriceps split a short distance above the patella. If there are loose bodies in the posterior compartment, some may be successfully forced through into the anterior section. This is not always possible, and it may be necessary later to enter the posterior compartment by a posterior incision. It has been our custom not to do this at the primary operation, but, preferably, about two or three weeks later, in the meanwhile not allowing any motion of the knee. The posterior approach is not easy, particularly if the patient is fat or very muscular. The incision is six inches in length, running down the middle of the popliteal space. The center of the incision is located over the joint line. It is preferable to dissect down between the heads of the gastrocnemii so as to keep the nerves and vessels to the outer side. The popliteal muscle is dissected through, the ligament of Winslow is divided, and the joint entered. By slightly flexing the knee, the capsule is a little relaxed and curved forceps may be introduced. If the bodies cannot be removed in this way, it may be necessary to force them out by

palpation, both within and without the wound. It is not always easy to remove all of them.

Following operations on the front of the joint, when the capsule is opened on the inner side or the patella split, a plaster-of-Paris cast should be applied and worn, in the latter case for three weeks. When the posterior incision is used, a cast is necessary for a week only. Rupture of the crucial ligaments does not produce typical mechanical derangement of the knee. The disability, however, is extreme. If the anterior crucial ligament is torn, the slipping forward of the tibia on the femur will be permitted, whereas rupture of the posterior crucial ligament will permit a slipping backward of the tibia on the femur. Open operation for suture is not necessary. If the knee is placed in the normal or a very slightly flexed position in a cast well padded to take care of the swelling, an excellently functioning joint will result.

CONCLUSIONS

1. Mechanical derangements of the knee are usually produced in the order named, by a damaged internal semilunar cartilage, by loose osteo-cartilaginous bodies, and by the external semilunar cartilage.
2. Loose bodies of extrinsic origin produce derangements but are not frequent in civil practice.
3. Loose bodies *per se* demand removal.
4. A patient giving a history of mechanical derangement owing to a damaged semilunar cartilage should not be operated on, unless the locking is repeated or reduction cannot be accomplished in any other way.
5. In properly selected cases the operative results are excellent.

REFERENCES

- Davis, G. G.: Applied Anatomy. Philadelphia: J. B. Lippincott Company, p. 538.
- Freiburg, A. H., and Wooley, P. G.: Osteochondritis Dissecans; Concerning Its Nature and Relation to Formation of Joint Mice. *Am. Jour. Orthop. Surg.*, 1910-1911, viii, 477-494.
- Henderson, M. S.: Loose Bodies in the Knee-joint. *Am. Jour. Orthop. Surg.*, 1916, xiv, 265-280.
- Henderson, M. S.: Osteochondromatosis of the Knee-joint. *Am. Jour. Orthop. Surg.*, 1917, xv, 351-356.
- Jones, R.: Notes on Derangements of the Knee. *Ann. Surg.*, 1909, I, 969-1001.
- Jones, R.: Disabilities of the Knee-joint. *Med. War Manual No. 4. Military Orthopedic Surgery*. Philadelphia: Lea, 1918, 240 pp., pp. 87-104.
- Koenig: Ueber freie Körper in den Gelenken. *Deutsch. Ztschr. f. Chir.*, 1887-1888, xxvii, 351-109.
- Kopp, J. W.: Osteochondromatosis. *Nederlandsch. Tijdschr. v. Geneesk.*, 1916, ii, 1175.
- Ridlon, J.: Osteochondritis Dissecans. *Jour. Am. Med. Assn.*, 1913, lxi, 1777-1779.
- Whitlock, R. H. A.: Loose Bodies in the Knee; Special Reference to Their Etiology and Growth. *Brit. Jour. Surg.*, 1914, I, 650-664.

OPHTHALMIA NEONATORUM, THE CAUSE OF PREVENTABLE BLINDNESS*

By H. J. FRIESEN, M. D.

GRAND FORKS, NORTH DAKOTA

In this day of economy and conservation it does not seem amiss to again call to your attention the relationship of ophthalmia neonatorum to our blind population. We refer here to the ophthalmia of the new-born caused by the gonococcus only.

Much has been done in late years, and is still being done, to minimize the dire results of this disease; but the fact remains that it is far from being a vanquished foe. Of the total blind population of this country, which, in round numbers, is 60,000, about 30 per cent are blind because of a gonorrheal ophthalmia that developed during the first days of life; and statistics to date show that about 25 per cent of the inmates of blind asylums are blind as a consequence of this disease. This sounds like an awful indictment when we consider that it is possible to make blindness due to gonorrheal ophthalmia of the new-born well nigh a negative quantity if proper legislation were enacted and enforced.

With the single exception of atrophy of the optic nerve there is no other one cause responsible for so much blindness as ophthalmia neonatorum. And when we consider that this blindness begins with life itself, and that the statistics do not include the partially blind, while blindness due to atrophy of the optic nerve occurs only in middle life or in advanced age, we must realize that ophthalmia neonatorum is the most potent, as well as the most iniquitous, cause of blindness. It makes the victim a burden and a misfortune to himself, as well as to the community; it reflects against the sense of justice of the State for not employing more effective and stringent measures of prevention; it throws a stigma of guilt on him who was responsible for the first care of the new-born's eyes and who sinned in negligence. The weight of such guilt we can best realize when we think for a moment of our own child, or one very dear and near to us, as having been the innocent victim of such a calamity,—a life of darkness and despair that could and should have been prevented.

Aside from the humanitarian consideration it shows a pathetic extravagance on the part of the

State to leave blindness from this disease unchecked. It costs about \$30 a year to educate an ordinary child, and about \$400 a year to educate and care for a blind child. This does not take into consideration the many financial and sociological side-lights and the personal and state misfortunes incident to blindness and unproductive citizenship. Ophthalmia neonatorum costs this country \$7,000,000 annually.

This paper is not to be a general discussion of ophthalmia neonatorum. I shall only endeavor, briefly, to outline the most important measures necessary to prevent the disease and to help exterminate it. The blindness of ophthalmia neonatorum is not only an unnecessary blindness, but the victim thus afflicted, as stated above, is a burden to himself, an incumbrance to the commonwealth, and a curse on the State for its inefficient legislation for prevention and on an individual for his or her negligence. This in face of the fact that the Credé treatment for *all* new-born children would almost entirely eliminate from the world ophthalmia neonatorum and its dreadful consequences. Facts prove that the use of this essential treatment is by no means universal, and its mission is not confined to midwives. Some reputable physicians use it invariably; others never use it; and still others use it when conditions are suspicious. In order to accomplish its purpose the use of it should be universal. It should be made an integral part of every confinement, and be recognized as a reliable provision against blindness. In order to reach this goal it is essential that the laws of the State should require under penalty the use of prophylactic measures, and not only that, but they should prescribe exactly what prophylactic means must be employed, and, further, the State should provide and distribute free the means and material for carrying out such treatment, including printed instructions. Birth reports should be made within 72 hours after delivery, and should state that the proper preventive measures have been used. A report of a developed case—and there would be few or none of such cases if proper prophylactics were used—should be made immediately on discovery to the proper authorities by any person in charge of such case; and treatment should be instituted at once, for

*Read at the 31st annual meeting of the North Dakota State Medical Association, at Fargo, June 19 and 20, 1918.

a few hours' delay may mean permanent blindness.

Midwives are a financial and sociological necessity, fully one-half of all deliveries being attended by them. The State should require that midwives be educated, examined, licensed, and inspected, and that they should be compelled always to call in medical assistance in complicated cases.

Further: No man who has had gonorrhea has a moral, and he should not have a legal right to marry until he knows as the result of expert examination that he is no longer the bearer of an infection which can produce such terrible results.

A law in itself is a dead letter; it must be obeyed to be effective. But we need laws as a working basis, and proper provisions should be included in every law to enforce obedience and punish disobedience.

It is a necessity and an obligation that the public receive full information in regard to this dreadful disease, with the danger to the offspring of infection in the parent; and the public should be given elaborate instructions in regard to prevention. After the public generally is sufficiently educated in regard to this disease, it will no longer be difficult to enforce observance of the law in regard to the prevention of ophthalmia neonatorum, for then people will demand of the attendant such observance of preventive measures as the law requires.

The State, the public-health officers, and the physicians should be instrumental in disseminating such instruction. Propaganda for the prevention of unnecessary blindness can best be carried on by distributing the necessary facts and instructions in the form of printed leaflets. In these leaflets cause and effect should be clearly set forth; the expectant mother should be informed as to the symptoms which should lead her to suspect an infected birth-canal, and what she can do herself to stop a discharge lest a blind baby result. She should not hesitate to get good medical advice and attention during the last couple of months before delivery if there is any discharge. The leaflets should give detailed instruction in regard to the care of the baby's eyes immediately after birth so that, even in the absence of trained attendance, the proper preventive measures can be applied. This, of course, includes the formula for the silver solution, and information as to how and where to procure it and how to use it. It should be particularly emphasized that this treatment

must be invariably carried out, even where there is no reason to suspect disease. Great emphasis should also be laid on the necessity of immediately consulting a good doctor if the baby develops red eyes after birth. It should be made clear that, if the baby develops ophthalmia neonatorum, the services of an ophthalmologist are essential; and instruction as to the danger of the discharge and how to practice cleanliness and asepsis, should be given. We cannot disseminate too much information on this subject.

In regard to the physician's responsibility before the birth of the child, I shall quote a paragraph from Edgar:

"The care of the mother before confinement should receive more attention than it does at present. The history of every pregnant woman should be thoroughly investigated for symptoms of gonorrhea occurring, not only during, but also previous to, her pregnancy. This may be done without arousing the patient's suspicions as to the reasons for the questions. A history of frequent and burning urination followed by an increase in the amount of vaginal discharge, is a warning that is like a red flag of danger. A woman with such history should have the most painstaking laboratory examination of her secretions made. Every woman, no matter what her station in life or how free her history is from symptoms or inflammation, should have early in her last month of pregnancy a laboratory examination of her private secretions made."

The first duty of the accoucheur, whether physician, midwife, nurse, or other attendant, after the baby is born, the cord tied, and the mother safe, and before the baby is bathed, is to clean the eyes of mucus and secretions, retract the lids, and wash the conjunctival sac with a saturated boric acid solution, and then instill two drops of a fresh one or two per cent silver nitrate solution into each eye, and not wash it out. As yet there is no other agent that can replace the silver nitrate. If there is any reddening of the eyes, or slight discharge afterward, it may be due to the chemical irritation of the silver solution, and should subside promptly. Nevertheless, every discharging eye should be made the subject of a microscopic investigation for the presence of gonococci.

If an eye develops a gonorrheal infection the child should at once be placed under the care of a competent oculist and, if practicable, in a hospital. The treatment of a case of ophthalmia

neonatorum requires the services of two nurses because it has to be applied practically constantly, night and day. The essentials of the treatment are atropine, half-hourly irrigations of the eyes with a cleansing solution, and silver nitrate two or three times a day. But if the Credé treatment and proper sanitary precautions were invariably carried out at every delivery, ophthalmia neonatorum would rarely or never occur.

I cannot go into a detailed analysis or review of the laws of the various states bearing on ophthalmia neonatorum, but shall state a few facts.

In 24 states ophthalmia neonatorum laws have been primarily passed by the legislature, and in 9 states state board of health laws have become state laws through the legislature endorsing the action of the state board of health. This makes a total of 33 states.

In 3 states state board of health rules have been passed in regard to this disease, but not endorsed by the legislature.

In 16 states the medicine is free upon application.

In only 8 states a prophylactic applied to the eyes after birth by a doctor is compulsory.

In 3 states (Maryland, District of Columbia, and New Hampshire) *only* doctors are allowed to use a prophylactic.

In only 10 states it is required that any doctor, midwife, or nurse attending a case of confinement shall use a prophylactic after birth.

In only 6 states a certain drug is required to be used as a prophylactic.

In 11 states the birth-report requires an answer to the question whether a prophylactic was used at birth.

In 5 states (New Jersey, Louisiana, Massachusetts, Ohio, and Wisconsin) appropriations have been made for a campaign against ophthalmia neonatorum.

North Dakota requires a birth-report within thirty-six hours after delivery, and it is one of the 11 states that requires an answer to the question whether a prophylactic at birth has been used, but does not specify what prophylactic is used. The law makes it compulsory to report whether or not a prophylactic has been used, but leaves it to the discretion of the attendant whether or not to use it.

There is at present no state that has a comprehensive and efficient law in regard to this dreaded disease. Some of the essential points

that should be included in such a law are the following:

First. The agent of prophylaxis should be specified.

Second. It should be compulsory to use it on every living child that is born whoever the attendant at birth may be.

Third. Birth-reports should be made within seventy-two hours after birth, and should state that the proper prophylactic has been used and used immediately after birth.

Fourth. The state board of health should furnish free of cost to registered attendants the specified prophylactic means and instructions.

An article entitled "A Composite Ophthalmia Neonatorum Law" by Thomas Hall Shastid, of Superior, Wis., appearing in the *American Journal of Ophthalmology* of January 1918, gives what we may well consider a comprehensive and efficient law in regard to this disease, and it is worthy of adoption by all the legislatures of the states.

DISCUSSION

THE PRESIDENT: Gentlemen, you have heard the paper of Dr. Friesen on the cause of preventable blindness. This is a live topic. It is so at the present time, especially since the Federal Government has taken up the subject of venereal disease, which has been brought out so prominently on account of enlistments. We have only a short time for discussion, but I am sure a great many of you would like to discuss the paper.

Dr. McGurrien, of the State Board of Health, will open the discussion.

DR. C. J. MCGURRIEN (Devils Lake): I regret very much that, because of a ten days' absence from my office, I failed to receive notice that I was to discuss this very excellent paper. It seems to me, however, the doctor has covered the entire ground very thoroughly. It is a subject that is timely and one worthy of our careful consideration. The doctor touched the keynote when he said there is no adequate law in the state governing ophthalmia neonatorum. It is optional with the physician or other attendant whether or not he use a prophylactic. It is true the law requires the attending physician to answer the question whether or not precautions were taken, but this does not save eyes. A penalty should be imposed in case of failure to use a prescribed prophylactic; then we would find its use pretty general.

The Department of Public Health has given some educational publicity to this subject by means of eye-posters and electrotype cuts in bulletins and leaflets. These serve to call the public's attention to the great danger of neglect in treating babies' eyes at birth. It also shows the untold harm to both mother and baby as arising from the attendance by careless, uncleanly, and ignorant midwives.

The doctor has given us an outline of just what is needed in legislation along this line, and I would suggest that during this session the matter be brought before the public-health committee of which I have the

honor to be a member, and an effective ophthalmia neonatorum law drafted, to be submitted before the next legislature.

DR. E. A. PRAY (Valley City): When it was suggested that I discuss this paper, I was reminded of an experience in my early practice when I was caring for a case of delirium tremens, and one of my associates informed some of his friends that I could not possibly take proper care of that case because I had never been drunk.

I have not had very many obstetrical cases in recent years, but in somewhat over 1,200 cases I never had a case of ophthalmia neonatorum. In the earlier years I did not take the precautions I took later on, and, whether it happened because the care that I gave was sufficient or because of the greater popularity of the gonococcus later, I do not know why it was I had so many cases without that trouble.

I wish to just emphasize one thing, which was also emphasized in the paper, and that is that the State furnish free of charge to the obstetrician and midwife the silver solution that should be used in the eyes. I know of two states where this is done, notably Wisconsin and Minnesota. They furnish the ampoules which make it so easy to drop the solution into the eye, that it can be safely done, I believe, by any midwife. I think the cost of them is somewhat like ten cents each. These ampoules would hardly be purchased by the midwives, but, if they were furnished by the State, we would be well assured of their use so as to prevent this disease, which causes such a great percentage of blindness. (Applause.)

DR. F. W. MACMANUS (Williston): I believe I stand on record in this Association as opposed to the ordinary midwife. I am so opposed frankly, utterly, absolutely—unalterably opposed to them under the present conditions, and will always be opposed to them until they are required by law to satisfy the authorities that they possess a moiety of knowledge of the art of obstetrics. I am going to oppose a part of the doctor's paper on that ground. If the State furnishes a midwife with any instruction or paraphernalia whatsoever, it gives her a sort of license by law, and, while the gonococci may not bother you down here in Fargo very much, at Williston they are very prevalent, and midwives are more so and, I believe, are more dangerous.

I have no use for the Grannyquack in any way, shape, or form, and I think that the State ought not to sanction her in any such way. If the State would furnish the doctors who practice obstetrics with any information which they do not already possess, I, for one, will be very glad to receive that; but, if there are any midwives to be so affected, I believe it is no more than fair that they be required to take the regular four years' course plus two years of college work, the same as required of doctors for the practice of obstetrics. I believe that would eliminate twenty-four out of twenty-five, and that would suit me. (Applause.)

DR. JOHN H. RINDLAUB (Fargo): Notwithstanding the popularity of the gonococcus, it has been given

credit for too much in these cases of ophthalmia neonatorum. Morax, in his long series, found that a proportion of less than 50 per cent of the cases are due to gonococci. There is one thing in which I think we all fail as general practitioners: we are often careless in our diagnosis and faulty in our technic because we do not take the pains to stain for the gonococci in the proper way. The ordinary single stain will not differentiate, and you need to stain with the Gram method. That will eliminate some of the other confusion germs that are present in many cases of ophthalmia neonatorum not due to social disease. Remember the gonococcus is distinctly a Gram-negative organism.

As you are aware, the temperature of the mucous membrane of the eye is about two degrees less than that of the mucous membrane of the mouth. That is due to three things,—the exposed position, the effect of the evaporation of tears, and the comparative small mass of blood-vessels in the conjunctiva. This condition does not obtain in the infant. At that time of life the lacrimal gland fails to functionate, and there are no tears. Another thing: the eyes are subject to more or less traumatism during parturition; the pus is liable to obtain lodgment in the eye; the eye remains closed and furnishes a very fine medium for the growth of many germs. The lacrimal fluid in itself does not furnish a good culture medium, and that is one reason why we have so much less of any infection in adults than in infants.

Lucien Howe, of Buffalo, was perhaps the pioneer in forcing the matter of legislation. I remember that over twenty years ago he was very enthusiastic, indeed, but he did not have many supporters. At that time there were only a few such laws passed. Now, as was brought out by Dr. Friesen, such laws are on the statute books of a great many of our states. Credit should also be given to our National Committee of Blindness and to the Committee on Conservation of Vision connected with the American Medical Association, which have conducted a series of thousands of lectures, so that now we have a campaign of education in every state in the Union. There is no use of passing laws unless you can enforce them, and you cannot enforce them unless you have co-operation. So there are three things which are cardinal features in reform movements: education, legislation, and co-operation.

DR. FRIESEN (closing): I do not think there is anything more I can say. I want to thank the gentlemen for the discussion. There is one point: I do not think there is any one of us who advocates midwives—I do not think any one of you favors the idea of having midwives, but we can not get away from them, and we shall not get away from them, no matter what position we take. So the best we can do is to get them to conform in some way, and a state law should do that.

DR. C. E. STACKHOUSE (Bismarck): I would like to ask Dr. Friesen how long to allow the silver nitrate to remain in the eyes before washing it out?

DR. FRIESEN: Don't wash it out at all.

LOCAL ANESTHESIA IN INGUINAL HERNIA*

By A. W. IDE, M.D., F.A.C.S.

BRAINERD, MINNESOTA

The operation for the radical cure of inguinal hernia is deservedly popular. Practically every physician, whether or not he has had surgical training, does not hesitate to undertake this operation upon a fairly favorable subject. There is perhaps no operation where the surgeon can give a more favorable prognosis. Our leading surgeons are apt to apologize for presenting these cases in an operative clinic before an audience of medical men. Their attitude is that these cases should be done in a side-room by an interne or by one of the lesser lights of the surgical staff. Some of you may wonder why the time of a State Association should be occupied with a subject upon which the last word has apparently already been said. Still, a great number of people endure the discomfort and disability of this defect rather than apply for treatment.

The recent examination of men drafted for army service has revealed a vast number of individuals who are rendered, to some extent, inefficient on account of hernia. I was recently authoritatively informed that in one of our cantonments 600 men were awaiting operation, and hundreds of new men were coming in daily to add their quota of hernias to augment this number.

If this operation is being well done, if the mortality-rate is almost nil, and if the operation is uniformly giving good results, why are there so many unoperated hernias? Either the people are not informed, or they have a dread of the hospital that makes their ailment seem comparatively insignificant.

Every surgeon frequently sees hernia patients who are unsafe risks for a general anesthetic. Many old men are afflicted with hernias that cause total disability, hernias that have existed for many years, and have become progressively worse. They come to operation when strangulation occurs. Then, if operation is postponed for a few hours or if chloroform or ether is given, the chance of the life of the patient is very poor.

Patients with marked disease of the heart, lungs, or kidneys must be denied operation under a general anesthetic unless an urgent emergency exists.

A recent case is reported from the New York

Surgical Society which is of interest. On the seventh day after confinement a woman was operated on for inguinal hernia under local anesthesia. Her convalescence was uninterrupted. The writer says: "It seems well worth while to use this method in such cases, for in this case the hernia operation was hardly more than a momentary inconvenience in the course of her obstetrical recovery."

There is nothing new about the operation for the cure of hernia under local anesthesia. Still the fact remains that it is rather difficult to see this operation done in any of our large clinics. In very few places is this method used as a matter of choice by the surgeon. More extensive and difficult operations are done under local anesthesia, but only when conditions make this method necessary. Many cases are reported of undesirable surgical risks undergoing operation for hernia under local anesthesia, but little is said in favor of this method as a routine procedure. There is no good reason why the average patient should not have the benefit of this method.

The nature of the work in our hospital gives us rather a large percentage of hernias. During the last twelve years in our institution we have operated on 610 hernias. Most of these patients have been young men who would not be seriously affected by ether anesthesia. During the past two years we have used local anesthesia in an increasing number of cases,—at first only on patients who could not well take a general anesthetic; but later, as we became more and more convinced of the decided advantage, we have used it more generally. We have had difficulty at times in securing an adequate supply of novocaine. We feared we might not be able to secure the drug, and for this reason a general anesthetic has been used more freely. With the present plentiful supply of American-made novocaine we feel free to make more general use of the method.

Technic.—The patient receives the same preparation as for general anesthesia, except that food need not be withheld. A hypodermic injection of one-sixth grain of morphine is given thirty to forty-five minutes before the operation. We use no other hypnotic drug, as we prefer to depend upon the novocaine rather than on other hypodermic medication. The patient is made as comfortable as possible on the operating-table by

*Read at the 31st annual meeting of the North Dakota State Medical Association, at Fargo, June 19 and 20, 1918.

means of a heavy pad and pillows. A nurse attends to his wants during the operation, and keeps his mind occupied as well as possible. Much depends upon his mental attitude and co-operation. Two strengths of novocaine solution are used, namely, 1 per cent and 0.25 per cent.

No adrenalin is used, as it is difficult to insure the asepsis of the adrenalin without rendering it inert, and hemorrhage can best be permanently controlled without its use.

Syringes of two sizes are used. The larger contains the weaker solution, which prevents confusion as to the strength of the solution used. Interchangeable needles are supplied,—a small needle (No. 25, $\frac{3}{4}$ -inch) for use in the skin and around the nerves, and a larger one (No. 21, $1\frac{1}{2}$ -inch) for general infiltration. The 1 per cent solution is used in the skin and around the nerves; the 0.25 per cent is sufficient for all other purposes.

The skin is pierced by the small needle, and the proposed line of incision is infiltrated with the 1 per cent solution. The needle is pushed well toward the surface of the skin, causing the wheal to appear. The infiltration is continued by carrying the needle through the tissue that has already been anesthetised. The larger needle, with the weaker solution, is then used, and the tissues between the skin and the aponeurosis of the external oblique are infiltrated rather widely. The incision is then immediately made. No delay is necessary as the solution will immediately anesthetize the skin. When the aponeurosis is exposed it is pierced with the large needle and the tissues immediately beneath are infiltrated. It is then split, and the cord exposed. The tissues immediately surrounding the cord are lightly injected, and the cremasteric muscle divided. It is well to inject around the internal ring the 1 per cent solution; and, if the cord is to be transplanted, the nerves are blocked at this point. The patient is then asked to cough, and he will usually push the sac well into view. This is caught and injected. It is then dissected free by means of a sharp scalpel, the sac is opened, and the finger gently inserted into the peritoneal cavity. With the finger as a guide all the structures to be subsequently invaded are thoroughly injected. The needle is passed down through these tissues, but can be definitely controlled by the finger beneath. The finger is then withdrawn, and the sac treated as desired.

The deep stitches are placed according to any method. It is somewhat easier not to displace the cord, and the results appear to be as good as in

Bassini's operation. The closure may be done according to any method. We use metal clamps on the skin, as they can be quickly applied and the skin may be somewhat sensitive if the operation is prolonged.

Objections.—It is stated that the injection of a solution devitalizes tissue, and for this reason better wound-healing and a better final result can be obtained with a general anesthetic. In a series of 30 cases our experience has been uniformly good in this respect. We have had no infection. In two cases there was some discharge of serum from the wound, but in neither case did this persist longer than a few days.

The solution is made up with distilled water, and is sterilized by boiling for thirty minutes immediately before use. The adrenalin, when used, may be a source of contamination. Unless one is assured of its sterility it should be eliminated. The advantages of its use are, first, it gives more prolonged anesthesia. The action of novocaine alone will last thirty minutes, and this is sufficient for the work. Secondly, the absorption of novocaine is slower with its use, and if large quantities are used it is perhaps safer to add the adrenalin to the solution.

Another objection that is made is that the work is not as thoroughly done. This means merely that the tissues are traumatised to a greater extent under a general anesthetic, which is certainly not an advantage. The tissues must be handled very carefully, and the trauma reduced to minimum. An operator is very apt to take liberties with tissues under general anesthesia that he would not think of taking under local anesthesia. Everything can be done that is necessary for the thorough repair of the defect, and this is all that should be done. Sponge dissection has no place in this work. A sharp scalpel will do the work better, and reduce the injury of tissue materially.

We have had but one case of recurrence. This was in a man 84 years old, with a strangulated hernia. The operation was somewhat hurried, and no attempt was made to do more than relieve the emergency. The patient was allowed out of bed on the third day on account of his age. The use of the local anesthetic undoubtedly saved this man's life, although it did not cure his hernia.

We have seen no ill effects from the absorption of novocaine. The maximum amount used in any one case was nine grains. The operation was for the repair of a double hernia. This drug is being used extensively with no reports of toxic effects. An inguinal hernia can be painlessly re-

paired with the use of four grains of novocaine, and it would seem that the danger from absorption is very very small.

CONCLUSION

Novocaine used locally is the anesthetic of choice for operation on inguinal hernias, and should be used generally, instead of being confined to patients who are unsafe subjects for general anesthesia.

DISCUSSION

DR. V. J. LAROSE (Bismarck): I do not see anything in Dr. Ide's paper with which I can disagree. We have been using local anesthesia in hernia and other operations, but in hernia particularly, for a number of years. In fact, it is the rule with us to operate all hernias with local anesthesia. I can see no reason for using general anesthesia except perhaps in an occasional rare instance. The solution we have used is the half of one per cent and the one-fourth of one per cent novocaine. We find that the half of one per cent will produce all the skin anesthesia necessary; and the one-fourth of one per cent we use after going through the skin.

In making the injection we prefer to use a rather long needle, so that you can make one puncture through the skin and then work both ways subcutaneously when you can change needles and go through this puncture with a one-fourth of one per cent solution, and inject under the aponeurosis into the muscles. Then when the aponeurosis is laid back, we make a slight injection around each nerve; and with that amount of anesthesia we can go ahead and do operation without a bit of trouble. Occasionally we make an injection into the sac before it is tied off.

As Dr. Ide has said, really the one fine thing about local anesthesia is, it certainly develops one's technic. In working with local anesthesia it is necessary to handle the tissues delicately and without the mauling that the doctor spoke of that one is tempted to do under a general anesthesia. We have never seen any toxicity from novocaine, and I was speaking recently with Dr. R. E. Farr, of Minneapolis, who does practically all his work with local anesthesia, and he told me he has given as much as twelve grains of novocaine without the slightest symptom.

DR. THOMAS MULLIGAN (Grand Forks): I really have nothing to add. I think perhaps that the inference that Dr. Ide drew as to so many people carrying around hernias without having an operation is perhaps not due to the fear of having an operation so much as it is due to the fact that people can carry them around for so long without suffering. They suffer some discomfort, but, so far as being a real menace to the health is concerned, such as appendicitis, etc., they do not have that to fear, so I really believe, this is the reason that people neglect operation.

I saw a very good illustration of the efficiency of local anesthesia in an operation for inguinal hernia in the Polyclinic in New York about two years ago. I forget the surgeon's name, but he first blocked the nerves. That was the first thing. He always blocked the ilio-inguinal and the iliohypogastric nerves, and he blocked the nerves of the skin afterwards.

The patient was an Italian. He had recently come

to this country, and he was naturally a patient who would be very apprehensive. The surgeon said he had chosen that particular patient to illustrate the efficiency of the anesthesia. The patient did not understand any English, and the operator told us to watch the patient's toe, and if we saw him even move his toes we might consider there was something wrong with his technic. We watched rather carefully, and we could not see the patient show the least evidence that he had suffered any pain during the operation. As far as the popularity of local anesthesia is concerned, I think that question will work itself out in time.

DR. S. O. SAND (Fargo): I had opportunity in the last month to follow the work of local anesthesia in New Orleans, which I suppose is the center for local anesthesia in this country. I was struck by the same thing Dr. Ide mentioned, that the use of adrenalin would be unsafe because it is hard to sterilize and keep sterilized. I asked Dr. Bradburn, of New Orleans, who has done a great many operations and is using local anesthesia for his operations: "Do you use adrenalin, and do you not get infection?" He answered: "For a long time I have operated on practically all hernias under local anesthesia. The only case where I did get infection was a case where I had not used adrenalin."

There is another thing that might be worth while to add. The price of novocaine has made it nearly prohibitive lately, and apothecine has been brought into the market, and has been used in New Orleans a long time. It seems to give absolute satisfaction. Its density is something like that of novocaine, and the duration of the anesthesia is still longer. There seemed to be general satisfaction with it.

DR. E. M. WATSON (Hope): One very important thing about hernias is the fact that they often present emergencies in which the time element is to be considered. I have had four cases of strangulated hernia in very old people, and, if time had been taken to remove them to a hospital for operation, the results would probably have been fatal.

Local anesthesia was used in all of these cases, first, on account of lack of assistance and, second, on account of the extreme age and poor physical condition of these patients. The results were uniformly good.

One of the above cases occurred as a strangulated umbilical hernia in a man over eighty years of age. Local anesthesia, as described in Braun Shield's textbook was used with a perfect result, enabling me to use the over-lapping method, as described by the Mayos for the cure of umbilical hernia.

Another case of strangulation occurred in a woman over eighty-two years of age. She had had an inguinal hernia all her life, but had always been able to keep it properly reduced. Forty-eight hours would have elapsed before she could have been placed in a hospital for treatment. She was relieved very satisfactorily under local anesthesia, and was about doing her work on the seventh day.

One other case of strangulated hernia occurred in a child about three years of age. On account of the age, general anesthesia was used in this case.

I should like to ask the opinion of our members as to the use of local anesthesia in children.

DR. NILS TRONNES (Fargo): We had a case at the hospital about a week ago that presented some rather unusual features. The patient was a young woman.

about thirty years old, who had been operated on for an appendical abscess about four or five years before. She was tuberculous, and she had evidently a tuberculous appendix, which discharged continually, and she stayed in bed for three years. But the girl recovered, and it finally healed last fall. She had gained in weight, and her condition was very satisfactory. We thought it might be time to fix her hernia. She had an immense hernia. It was bigger than an ordinary grape-fruit, and the hole in the abdominal wall was so large you could easily put four or five fingers into it.

With novocaine it was easy to remove the scar tissue and open up the peritoneum, and still there were no adhesions inside of the peritoneal cavity. It was easy to remove the appendix, but the difficult feature was how to bring together the muscles, because it was quite a big gap, a couple of inches from the internal and the external edges. With quinine-uria injections in the muscles around the hernial opening, the edges could—with some tension—be brought together. This procedure was absolutely painless, and she had no pain in the wound subsequently. It healed nicely by first intention. There was some tension but it was absolutely painless to the patient. That was eight or nine days ago and the wound is healed.

Dr. IDE (closing): In regard to the strength of the solution, Dr. LaRose said they are using one-half of one per cent. I think that matters very little, as different operators always vary technic to meet their own personal preferences. Dr. Mulligan rather minimized, it seemed to me, the importance of hernias. A hernia should be repaired, there is no question about that, and there is grave danger in people going about with hernias and not having them repaired. I do not think a young man, starting in at twenty or thereabouts, can expect to go through his life with a hernia without suffering strangulation. He is in constant danger all the time. A hernia is just as real a menace as a diseased appendix. I think hernia should certainly be repaired.

There are a good many of these points that are very interesting, and the object of my paper has been accomplished in the very full discussion that has been given it. I merely wanted to emphasize in this paper the fact that this operation is an operation that can be done by the general practitioner. No special apparatus is needed. All you need is some novocaine, and with ordinary boiling it can be rendered absolutely aseptic. There is no special danger in any respect, with the infiltration method without any special attempt at nerve-blocking; the ordinary operator can do a hernia operation without any trouble. If he can do it under general anesthesia he can do it equally well under local anesthesia. It is more difficult, but it is, I believe, very much more satisfactory.

The opinion here seems to be unanimous that this is the way to do these operations, but in ordinary practice we know it is not usually done. It is a good deal of bother. I believe that is the main trouble, but I think if we were to have a hernia done on ourselves we should undoubtedly have it done in this way.

As to the question of local anesthesia in children, mentioned by Dr. Watson: Dr. Haggard, whom I heard recently speaking on the question of using local anesthesia in children, says that it is very satisfactory with children. Children have no fear. My experience

has been very limited with work on children, but I have used it. A child of six years was the youngest, but I had no difficulty whatever. As long as you do not hurt them you are all right.

Dr. E. A. PRAY (Valley City): I think Dr. Haggard advises the use of one-tenth of 1 per cent of novocaine.

MISCELLANY

MILITARY AND CIVIL NEED FOR DOCTORS

Dr. W. A. Evans, former health commissioner of Chicago, has followed up the recent meeting of the American Medical Association, at which the drain of physicians from civilian life was discussed, with figures showing the need for the Government to apportion available physicians to the relative demands of war service and of the civil population.

Presenting his figures in the Chicago Tribune, Dr. Evans declares that, according to the American Medical Directory, 125,000 of the 150,000 physicians in the United States are said to be in the actual practice of medicine. This is one to every 800 of the population. At present the Government furnishes one physician to every 143 men in the military and naval service, and as Congress has authorized an increase in the forces which may soon reach 5,000,000, the 25,000 physicians either now in uniform or recommended for service may soon number 40,000. This leaves 85,000 active physicians, or one physician to every 1,176 of the people.

Meanwhile the number graduated each year by the medical schools is not quite equal to the number of doctors retiring and dying, and therefore does not cover the 2 per cent increase required to keep pace with the growth of population. The importance of maintaining the ratio of one physician to 800 of the population is emphasized by the facts that about 2 per cent of the civilian population is sick and away from work all the time, that at least 10 per cent of those at work are incapacitated for efficient work by physical defects or organic unsoundness. Munitions manufacturers claim that the labor turnover and absenteeism among men employed by them is at least three times as high as the average—due, Dr. Evans thinks, to a high rate of sickness, to the fear of occupational disease, to high wages, to general thriftlessness and other causes.

These facts bear out the need of industrial physicians, as claimed by the managers of large industries, who are also demanded for military service. Many health commissioners, bureau heads and inspectors have already left health departments to serve in the army. Dr. Evans asks how many doctors and health officers should be apportioned to the 5 per cent of the American people in the army and the 95 per cent who still live and work as civilians. Whatever the proportion should be, the question, he says, should not be decided from the standpoint of individual patriotism, because it is as patriotic for some to stay at home as for others to go to the field, and because the war is to be won by efficiency both at the front and at home. As in France, so here it may be necessary for the Government to take over the entire medical profession and allot physicians in accordance with the relative needs.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
 The Official Journal of the
 North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
 H. J. ROWE, M. D. - - - Casselton, N. D.
 H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

SEPTEMBER 15, 1918

THE ANNUAL MEETING OF THE MINNESOTA STATE MEDICAL ASSOCIATION

The meeting of the Minnesota Medical Association, which took place in Duluth August 28th, 29th, and 30th, was attended by two hundred and twenty-five members. Fortunately, Duluth presented a climate which increased its reputation as a climate-maker. The committee of arrangements had a large hall for the meeting of the Section on Surgery and the Section on Medicine, and a suitable one for the House of Delegates, which met at the Commercial Club. The program was greatly appreciated by the members who were present, and some very clever papers were read, both in medicine and surgery.

On the afternoon of the 29th the meeting was largely a patriotic one, and was addressed by Colonel Miller, of the Surgeon General's staff, who talked on the registration of doctors for the Medical Reserve Corps,—what they have done, and what they are going to do. He announced that there are now approximately twenty-seven thousand doctors in the service; and for an army of five million there will have to be fifteen thousand more. Major McLane for the Volunteer Medical Service Corps emphasized what Colonel Miller had said, namely, that medical men in small communities and small towns who are needed, should not enlist and leave their communities without medical aid. He also described in detail classes to which the members

of the Volunteer Medical Service Corps belong.

President Gillette's address dealt entirely with the doctors' war problems, the benefits to the doctors and the benefits to the people; and he covered the field thoroughly.

The social side of the meeting was well looked after, and the members were given a boat-ride on Thursday evening, refreshments being served to those who cared for them.

Duluth has always been hospitable, and it is pleasant to visit so great and active a city with such a number of active medical men.

THE MEETINGS OF THE HOUSE OF DELEGATES

The first session of the House of Delegates was held on Wednesday afternoon, the 28th of August, and, on the whole, was rather an amusing, as well as an entertaining, affair. The usual routine business was transacted, and the reports of committees received, such as the reports of the Treasurer, the Secretary, and the Publication Committee.

Just before the reading of the report of the Publication Committee, Dr. J. Warren Little, of Minneapolis, introduced a resolution, which commented on the failure of the 1916 journal committee to fulfill its obligations, namely, to report to the component societies, in order to permit them to consider and recommend whether a journal should be published by the Association. The details of Dr. Little's statement will doubtless appear in *Minnesota Medicine* in an early issue. The resolution was defeated, but before its defeat, Dr. E. W. Buckley, of St. Paul, rose to his feet, and with dramatic attitude and gestures read an editorial which was published in the August 15th number of *THE JOURNAL-LANCET*, in which he claimed that he had been stabbed in the back, that his personal reputation (all that he had left) was being tramped upon, and that he would not tolerate anything which tended to injure that reputation; and, if necessary, he would follow the writer of that editorial into the bowels of hell, in order to save his reputation. These and many other remarks, which, doubtless, *Minnesota Medicine* will print as part of the proceedings, and which, if it does not, *THE JOURNAL-LANCET* will, will be found interesting.

Dr. Buckley spoke of his efforts in his recent trip to France to direct the expenditure of fifty millions of dollars for the benefit of the war sufferers, which was a very commendable thing to do, but it had nothing to do with the resolution. He finally wound up by defying anyone in the House of Delegates to show that he had neg-

lected his duty as chairman of the journal committee, particularly in reference to the referendum vote which the resolution provided for, and he vehemently contended that no such instruction was given to the committee, all of which was amusing to those who knew Dr. Buckley and who knew the specific wording of the resolution, which was introduced by Dr. Litzenberg, and provided "that matters in regard to a state medical journal be referred to a committee of five; said committee to report to the House of Delegates for final consideration at the next annual meeting [1917]; the report to be previously furnished to every component society for consideration and recommendation." The motion was unanimously carried with an amendment made by Dr. Farr, giving the committee "six months in which to make its report before the annual meeting of the society."

This resolution appeared in the official transactions of 1916 and of 1917; and at the 1917 meeting the failure to submit the committee's report to the component societies was discussed at length, and Dr. Buckley, in a very manly way, assumed full responsibility for the failure of the committee to take the referendum vote, specifically explaining the cause of the failure. He also pronounced the failure a *trivial* matter, but Dr. J. W. Andrews, of Mankato, insisted that it was a "*vital*" matter.

This specific and vehement denial by Dr. Buckley that the resolution called for a referendum vote was naturally accepted by the House of Delegates as conclusive evidence that no such resolution was passed by the 1916 House. Unfortunately, the Secretary did not have at hand a copy of either issue (Nov. 15, 1916, or Nov. 15, 1917) of THE JOURNAL-LANCET containing the official report of the Association, with the Litzenberg-Farr resolution. Of course, this left nothing for the House to do except to vote against Dr. Little's resolution to undo the glaring wrong done by the House of Delegates in 1917.

Copies of THE JOURNAL-LANCET of the above-named dates were obtained by Dr. Little, and at the meeting of the House on Friday morning he sought a reconsideration of the vote on the resolution introduced by him at the Wednesday session. This privilege was denied him on *parliamentary* grounds, and very properly, but he read into the record the facts named above as they appear in the official transactions of 1916 and 1917; and in his effort to do this he was met by parliamentary objections raised by Dr. Buckley, but

Dr. Buckley made neither denial nor explanation of the facts which are so discreditable to him.

We ask in all sincerity if there is more than one man in Minnesota who would thus hide behind parliamentary rules to shield himself from a condemnation out of his own mouth, and to prevent the undoing of a vital mistake by a body of scientific men,—that is, the mistake of ignoring by the law-making body of one year a resolution unanimously passed by the law-making body of the previous year,—a mistake made in so vital a matter as a referendum vote by the component societies appointing the members of such law-making bodies? Did Dr. Buckley's manliness, shown to his great credit in the House of Delegates of 1917, desert him in an emergency in 1918?

Will the *Journal of the A. M. A.*, with these indisputable facts now called to its attention, say "Well Done, Minnesota"? Will Dr. Simmons now have the manliness to ascertain all the facts in this controversy, and undo, so far as he can, the harm done by his editorial so timely published on August 14 and so opportunely used by *Minnesota Medicine* to injure THE JOURNAL-LANCET? We give him timely notice that the most essential truths in this whole controversy have not been mentioned, but he can find them in the official transactions of the Minnesota State Medical Association, fully elucidated in an editorial in THE JOURNAL-LANCET of November 15, 1917.

Then came the report of the Finance Committee of *Minnesota Medicine*, made by Dr. R. E. Farr as chairman, the other members present being Dr. Longstreet Taylor, Dr. J. E. Hines, and Dr. E. W. Buckley. In fact the whole meeting of the House of Delegates was dominated by Drs. Buckley, Taylor, Farr, and Hare,—the "big four." These men seemed to have a free hand in running things, and, doubtless, all of them assisted Dr. Farr in the preparation of his financial report, which contains food for thought. It will no doubt appear in an early issue of *Minnesota Medicine*.

Then came the election of officers. Dr. George Douglas Head, of Minneapolis, was elected president, to everyone's satisfaction. Two or three vice-presidents were elected, perfunctorily, it seemed, because the quartette above mentioned seemed to have no special interest in vice-presidents. When it came to the election of a secretary, Dr. Harry Workman, of Tracy, presented

the name of Dr. Thomas McDavitt. This was followed by silent meditation, when Dr. W. R. Humphrey, of Stillwater, nominated Dr. Earl Hare, of Minneapolis, who has been treasurer for several years. He was elected on the second ballot, 18 to 16.

Then came the selection of a treasurer, and, for some reason, the wheels did not move rapidly; but finally Dr. Buckley nominated Dr. F. L. Beckley, of St. Paul. No one seemed to know very much about Dr. Beckley, except that he is practicing in Merriam Park, a suburb of St. Paul. Dr. Buckley evidently thought he would make a good treasurer. His nomination was seconded, and he was duly elected.

One other important matter came up in a resolution introduced by Dr. Pettit, of Minneapolis, Secretary of the Hennepin County Medical Association, calling for the establishment of a Roll of Honor for the Minnesota medical men in the service. A second phase of the motion was that all dues of absent members should be remitted during the period of the war. This was adopted without opposition and without comment.

The work, present and past, of the above-named quartet, and the fact that two of them did most of the talking, especially in trying to evade an embarrassing situation, will probably prompt the editor of the *Journal of the A. M. A.* to write again: "Well Done, Minnesota."

DR. THOMAS McDAVITT, THE EFFICIENT SECRETARY

Dr. Thomas McDavitt has been secretary of the Minnesota State Medical Association for the past seventeen years, and has been one of the prominent men in medicine in Minnesota for a great many years. Even before he came to St. Paul to practice as a specialist in diseases of the eye and ear, he was known as a forceful member of the Minnesota State Association from Winona. He was a man of opinions; he knew men from all over the state; and his induction into office was a commendable thing upon the part of the House of Delegates of the State Association.

Dr. McDavitt knows more about the Minnesota State Medical Association and the professional interests for the promotion of which it was organized and is conducted than any other man in the state. In the management of the Medical Defense and of the State Board of Medical Examiners (of which he is chairman), in all the difficult work of the Legislative Committee, and in all the activities of the Association, he has

been so efficient, but never officious, that the work of the organized medical profession of Minnesota will be seriously impeded by his absence as secretary. He has been, in large measure, a sort of connecting link between the Minnesota and other State Associations, and between the Minnesota Association and the American Medical Association.

THE JOURNAL-LANCET realizes that for some years Dr. McDavitt has been in a very difficult position, but he has stood firmly for his convictions, and has been tolerant of other people's convictions.

No man can be perfect, no man can always be right; but Dr. McDavitt has been a power in the Minnesota State Medical Association, and the Delegates who secured his defeat will probably regret their venture.

For such a servant of the medical profession of Minnesota to be so deposed by a clique is so disgraceful that "dirty politics" is a mild term with which to characterize the action; and the man who is connected with such a clique tarnishes his own reputation.

Dr. McDavitt's retirement not only interferes with the proper working of the State Association, but it may interfere with his membership of the Judicial Committee of the American Medical Association, of which he is chairman.

As Dr. McDavitt was deposed by a clique under the leadership of the men who induced the State Association to start *Minnesota Medicine*, we wonder how the *Journal of the A. M. A.* can fail to say, "Well Done, Minnesota."

THE JOURNAL OF THE A. M. A. AND THE JOURNAL-LANCET

When the Editor of the *Journal of the A. M. A.* decided to compliment *Minnesota Medicine* under the title of "Well Done, Minnesota," he praised *Minnesota Medicine* and condemned THE JOURNAL-LANCET because it carried advertisements of which this self-appointed and new-born reformer thoroughly disapproves.

Instead of picking out a big journal like the *Annals of Surgery*, the *Boston Medical and Surgical Journal*, the *New York Medical Journal*, or the *Medical Record* for his vituperation, he chose THE JOURNAL-LANCET because he knows it has many friends and is widely circulated in the Northwest and stands in the way of *Minnesota Medicine*; but perhaps Dr. Simmons is intending to attack other and larger journals later in his career.

THE JOURNAL-LANCET has always maintained that the *Journal of the A. M. A.* is one of the greatest scientific journals in the world, and that it has been so made, in no small degree, by its editor-in-chief; but of late years he has evidently entertained a pathological grouch, which is apparent in his vicious, sometimes malicious, and sometimes libelous editorials. If the editorial staff of the *Journal of the A. M. A.* would stick closely to its own affairs and the conduct of the journal, its policies would be more popular; but it evidently is itching, like the Kaiser, to control the medical world or, at least, all things medical in the United States. It does now control and dominate over twenty-five state medical journals. It co-operates with a bureau that formulates these journals' advertising matter at regular intervals, and prescribes and proscribes what to do and say, and what not to do and say. The result has not always been satisfactory, although there are a number of good state medical journals. Some of them have broken away from Dr. Simmons's control, and, for some reason or other, the great State of Illinois has a state medical journal not under control of the *Journal of the A. M. A.* Perhaps, being, as it were, on the ground floor, Illinois knows what it does not want, or, perhaps, the old adage, that "A prophet is not without honor save in his own country," applies to the situation.

"Well Done, Minnesota" (likely to become a slogan) concealed the facts concerning the establishment of *Minnesota Medicine*. In a reply to a personal letter written by the editor of THE JOURNAL-LANCET to Dr. Simmons, the latter evaded the facts concerning the inauguration, and the machinery used in the establishment, of a state journal for Minnesota, and he conveyed a wholly false impression in his editorial, thus perverting the truth of the whole controversy in the Minnesota situation.

If Dr. Simmons had looked up the situation at all, or if he had tempered his attack with some truth, the House of Delegates at the recent Duluth meeting, in all fairness, might have taken a different attitude.

It may be interesting to our readers to know that some congenitally defective person connected with the *Minnesota Medicine* conceived the idea of copying the editorial "Well Done, Minnesota" and sending it out under the cover of an announcement with a notice that the House of Delegates would meet at the Commercial Club at Duluth at two o'clock Wednesday afternoon. This was sent, as we have ample evidence to

prove, to all members of the Association, in envelopes bearing the imprint of "Minnesota Medicine"; and we have a right to conclude that the cost (probably \$70) of this exploitation of *Minnesota Medicine* and pillory of THE JOURNAL-LANCET was paid out of the funds of the Minnesota State Medical Association. If this be true, we pronounce such expenditure a clear misappropriation of funds.

It may be worth while to point out to our readers where this loose handling of truth and ruthless handling of men and medical journals at the whim of Dr. Simmons, is leading. Dr. Simmons and his entire organization nearly ran into a snag at the recent meeting in Chicago of the House of Delegates of the A. M. A. In spite of his well-developed organization an attempt was made to overthrow it; and the opposition was composed of men of national reputation and standing, who had evidently grown tired of some of the policies of the department heads of the A. M. A. As the result of this opposition, the friends of the present organization had to work very speedily and far into the night to bring a sufficient number of Delegates to their point of view. It seems that a vote for the presidency was the key-note of the opposition, when, by hard work, Dr. Alexander Lambert was elected president. The vote stood 57 to 60 in favor of Dr. Lambert. The opponents of the present organization were able to bring out 57 votes against 60 of the organization proper. This was a very close call for everyone,—editors, secretaries, department heads, committee heads, and committee members, and it was an exceedingly close call for Dr. Simmons. This, too, reflects the feeling of the medical men throughout the country. This vote shows what a great many men think of the policies of the present organization, and from what one hears at the meetings from year to year, the feeling is, in the main, against the editor of the *Journal of the A. M. A.*

THE JOURNAL-LANCET feels that the course long pursued by Dr. Simmons is conclusive evidence that this great scientific paper is turning away from the truth in an unaccountable manner, and no explanation can be found for the course he is pursuing other than that of vindictiveness. When a great journal will permit in its columns such an editorial as that to which we refer, the editor of that paper is no longer worthy of the support and confidence of fair-minded men. The falsity of the statements made could have been ascertained had the writer of it sought the facts, which were, unquestionably, on the shelves of his library. Even the office boy could

have produced the facts by turning to the official proceedings of 1916 and 1917 House of Delegates of the Minnesota Association.

In addition to the injury which the editorial sought to do THE JOURNAL-LANCET, it did great injustice, at least by implication, if not by direct charge, to four of the best medical men in Minnesota. That editorial also exalted a man whose reputation has now been made out of his own mouth, and, if the editor of the *Journal of the A. M. A.* will read the proceedings of the last meeting of the House of Delegates, he will have to acknowledge this fact and decide for himself and by his own standard whether such self-revealed reputation is savory or unsavory.

The editor of the *Journal of the A. M. A.* says that he has been called almost everything that an enemy can call an editor. The quotations he makes illustrating this statement are amusing, but he seems utterly unconscious of the fact that he is capable of drawing out just such rejoinders. For instance, he says that any man who has anything to do with a medical journal that carries such advertisements as are carried by THE JOURNAL-LANCET, is opposing the propaganda carried on by the *Journal of the A. M. A.* He seems to forget that this broad condemnation includes not only the doctors of Minnesota, but most other men in the profession who are making American medical literature. He forgets, perhaps, that many scientific medical journals in this country that carry advertisements objectionable to him are made up largely of contributions from the best men in the country,—Chicago men, New York men, Boston men, Rochester men, etc. But the *Journal of the A. M. A.* has these spasms frequently, and we must bear with it, even when it makes false statements or indulges in generalities from which only false inferences can be drawn.

THE MISSISSIPPI VALLEY CONFERENCE ON TUBERCULOSIS

The serious ravages which tuberculosis has made in the warring countries of Europe renders it imperative that antituberculosis workers in this country shall put forth every possible effort to prevent a similar situation developing in America. Dr. Livingstone Farrand, who speaks with authority as director of the American Mission for the Prevention of Tuberculosis in France, tells us that tuberculosis is a greater foe to human life than is the German war machine. He points out that, while the total British casualties for the

week ending July 6 were nearly 18,000, the actual deaths were less than 3,000, or only 15 per cent of the total casualties, whereas each year the death-toll exacted by the tubercle bacillus in the United States alone is between 150,000 and 200,000, which gives a weekly death-toll greater than that suffered by the British in one week of the war.

Investigators have shown us that the abnormal conditions of war times have caused an alarming increase of the disease among the civilian population, as well as in the army. The general raising of wages has not kept up with the soaring prices of food, clothing, and housing; consequently, among the small-wage groups who compose the mass of the population, the food supply and general living conditions have deteriorated. This has produced a state of malnutrition which, in turn, has reduced the power of resisting disease, especially in children. Among adults, mental stress and anxiety are added factors in lowering the general vitality and increasing susceptibility to this particular disease, which always finds an easy victim in a constitution that is below par. This relationship between war and tuberculosis among the civilian population is tragically evident in France, and to a less alarming extent in the other warring countries. Dr. Herman Biggs says that 50,000 French soldiers have been returned from the front with this disease, and that 500,000 French civilians suffer from it.

Recognizing that only by unrelaxing vigilance can America hope to escape the scourge, the Mississippi Valley Conference on Tuberculosis will give the situation serious consideration at its seventh annual convention, which is to be held at Planters Hotel, St. Louis, Mo., on October 2, 3, and 4. It is expected that there will be a record attendance at the convention, which was held last year in Minneapolis. Preventive and curative work in this field is assuming a widely recognized importance, and the aid of antituberculosis agencies all over the country is constantly enlisted by the Federal Government, the Red Cross, and the Rockefeller Foundation.

Among the Minneapolis men who will take prominent parts in the conference are Dr. F. W. Wittich, Dr. F. H. Hacking, Dr. W. H. Hill, Secretary of the Minnesota Public Health Association, and Mr. Frank J. Bruno, Director of the Bureau of Civilian Relief for the Northern Division of the Red Cross.

A letter from the office of the Surgeon General

of the U. S. Army, approving railroad travel by the delegates to the conference, and another letter from Frank Pearsons, Director of Civilian Relief for the Red Cross at Washington, sent to all divisional directors in the Valley urging them to send delegates to the conference, have established the national importance of such a conference, in war times above all others.

The patriotic aspect of the conference will be heightened by the appearance as speakers of a number of army physicians and surgeons, including Dr. Davis Stern, of Camp Boehme, Evansville, Ind.; Lieutenant Colonel E. P. Hoaglund, Commanding Officer of U. S. General Hospital No. 19, at Azalea, N. C.; and Captains Gardner C. Johnson, John R. Peck, Kennon Dunham, of the U. S. General Hospital No. 12, at Baltimore, Md.

Dr. Stern will outline the duty of the individual state to its tuberculous soldiers; Lieutenant Colonel Hoaglund will tell what reconstructive measures are already being planned by the army authorities for the benefit of consumptives; and Captain Dunham will speak of the use of the x-ray in diagnosis.

Among the Minneapolis speakers will be Dr. F. H. Hacking, who will discuss dispensary methods; Mrs. Marshall H. Coolidge, who will tell of the aims of Children's Year; Dr. H. W. Wittich, who will speak on the subject of laboratory diagnosis; Dr. H. M. Bracken, Executive Secretary of the Minnesota State Board of Health, and Dr. H. W. Hill, Executive Secretary of the Minnesota Public Health Association, who will outline the state program for the eradication of tuberculosis. Mr. Frank J. Bruno, head of the Minneapolis Associated Charities and Director of the Civilian Relief Bureau for the Northern Division of the Red Cross, will talk on "Home Service" and its value in keeping up the morale of the civilian community, as well as of those who are fighting overseas.

Among the other topics of discussion, announces Dr. Alfred Henry, president of the conference, will be the conservation of health among "essential war industry" workers, the development of preventive work and public health nursing in small towns and rural districts, the importance of social service work with patients, the growth of the open-air school and open-window classroom movement, the value of co-operation from the public press, and the necessity for pressing such popular forms of entertainment as pa-

rades, exhibits, and motion pictures, into the service of health educators.

Among the speakers will be Dr. Ethan Allen Gray, Dr. George T. Palmer, Dr. H. V. Scarborough, Dr. David Lyman, president of the National Tuberculosis Association, Dr. Wilson Ruffin Abbott, director of Medical Field Service for the Illinois Tuberculosis Association, and Dr. Anna E. Rude, Director of the Division of Hygiene for the Children's Bureau.

The nursing profession will be represented by a number of speakers, who will include Miss Dana Weitzel, county nurse for Battle Creek Sanatorium, Miss Gertrude M. Rines, Miss Mary Coady, Miss Blanche Swainhart, superintendent of the Visiting Nurses' Association of Cleveland, and Miss Edna Foley of Chicago.

NEWS ITEMS

Dr. Thomas Gratzek has moved from St. Paul to Owatonna.

The new hospital building at Appleton will be completed within a month.

Dr. M. C. Sorenson has moved from Sioux Falls, S. D., to Highmore, S. D.

Dr. Egil Boeckman, of St. Paul, has been commissioned captain in the M. R. C.

Dr. O. J. Fuentes, of Costa Rica, has joined the staff of Dr. C. T. Granger, of Rochester.

Work has been begun on a modern hospital building at Alice, a new town on the Iron Range.

Minneapolis had three or four suspected cases of infantile paralysis in quarantine for observation last month.

It is believed that Major T. C. Witherspoon, of Butte, Mont., and the hospital unit raised by him, have gone to France.

About twenty cases of infantile paralysis were found at Spring Grove last month, and the disease was unusually virulent.

Capt. C. E. Morris, of Minneapolis, has been honorably discharged from the Army on account of physical disabilities.

Dr. F. L. Parsons, of Mountain Iron, has moved to Duluth and become associated with Dr. W. H. Magie, of that city.

Dr. C. C. Wallin, of Lewiston, Mont., has been appointed on the State Executive Committee of the Volunteer Medical Corps.

Dr. B. F. Simon, St. Paul's new City Health

Officer, is taking an active part in health movements outside of his official lines.

A proposed law regulating the practice of chiropractic in Montana, will be voted on by the people of that state in November.

One firm of physicians in Grand Forks, N. D., has furnished five men for the service, Dr. A. Bratrud being the last one to go.

Dr. H. T. Ground, formerly on the staff of the St. Peter Hospital, was wounded in France last month, and is now in a London hospital.

The meeting of the Minnesota State Medical Association, with the names of officers elected, is noted at length in our editorial columns.

Dr. Walter G. Aylen, of Fargo, N. D., son of Dr. J. P. Aylen, now in the service, has received his commission as first lieutenant.

Six women army nurses were naturalized in St. Paul last month. Four of them were former citizens of Great Britain, and two of Norway.

Dr. Wayne O'Brien, of Devils Lake, N. D., now in the army, was married last month at Chicago to Miss Mayme Stevens, of Hazleton, N. D.

Capt. G. A. Carpenter, of Fargo, N. D., has been honorably discharged from the Army on account of physical disabilities incurred in line of duty.

The machinery for the organization of the Volunteer Medical Service Corps has been started in a number of states, and the corps will soon be fully organized.

Great Britain has notified all British and Canadian physicians in the United States that they must either volunteer as medical men or be drafted as *merc* men.

Dr. P. J. Cress, of Ellsworth, succeeded Dr. Arnold, of Adrian, on the Medical Advisory Board of that district when Dr. Arnold was called into service last month.

An epidemic of a disease much like the ordinary summer complaint caused the death of several children, and the sickness of many more, in Grand Forks, N. D., last month.

Every member of the Fergus Medical Society in Montana has pledged himself to accept any commission in the medical service of the Government that may be offered him.

The nurses' training school of the Northwestern Hospital of Minneapolis graduated twenty-five nurses last week. Many of them will go abroad in the Red Cross service.

The Woman's Auxiliary of the St. Louis County Medical Society royally entertained the wives of visiting physicians at the meeting of the Minnesota State Association at Duluth.

Last month when an epidemic of typhoid fever was feared at the Rochester State Hospital, 1,300 patients and employes were inoculated, and the spread of the disease was checked.

The Nurses' Bureau of the Northern Division of the Red Cross, of which Miss Edith Barber, of Minneapolis, is the head, has not yet filled its quota of nurses. Over 100 are still needed.

Major J. P. Aylen, of Fargo, who has been on the surgical staff of the base hospital at Camp Wadsworth, N. C., went to Hoboken, N. J., last month, and is now probably on his way to France.

Dr. D. E. McBroom has sold his practice and hospital at Adams to Dr. R. E. Sutton, formerly of Toronto, S. D. Dr. McBroom has moved to Waterloo, Iowa, where he will continue his practice.

Dr. D. R. Campbell, a 1905 graduate of the University of Minnesota Medical School, who has been practicing in Pullman, Wash., has located at Bagley, where a physician was greatly needed.

Miss Charlotte M. Powel, superintendent of nurses at the Minneapolis City Hospital, has resigned, to accept a like office and also the assistant superintendency at Mount Sinai Hospital, N. Y. City.

The work of Dr. Mabel Ulrich in her connection with the Minnesota State Board of Health, is receiving high commendation from all quarters, and her lectures are largely attended wherever she goes.

Dr. W. J. McCarthy, of Madelia, has purchased a residence building which is being remodeled for hospital purposes. Dr. McCarthy will establish a hospital to meet an urgent need in that locality.

LaMoure County, N. D., will establish a hospital at LaMoure for the care of patients with trachoma. Dr. J. H. Oakley, of the U. S. Public Health Service, showed the need of such a hospital at that point.

Dr. L. W. Morsman, of Hibbing, has been appointed a member of the Medical Advisory Board of that district to fill the place of his brother, Dr. C. F. Morsman, who has gone to Boston for special work.

Dr. H. J. Rowe, of Casselton, N. D., the Sec-

retary of the N. D. State Medical Association and Assistant Adjutant General of the North Dakota G. A. R., attended the G. A. R. meeting at Portland, Oregon, last month.

Dr. H. McI. Morton, eye, ear, nose, and throat specialist, of Minneapolis, is one of the few doctors in the Northwest to enter the service with the commission of major. Dr. Morton has orders to go to Camp Oglethorpe, Ga.

Dr. O. C. Strickler, of New Ulm, has given \$1,000 towards creating a memorial fund for use in the education of young men to deal with the commercial and other problems arising out of our relations with South American countries.

Only about one hundred physicians in Minnesota are complying with the law in the matter of reporting venereal disease to the Division of Venereal Diseases of the State Board of Health. Some education and some compulsion will be necessary to effect the results aimed at by the law.

A state executive committee to obtain men for the Volunteer Medical Service Corps has been organized in North Dakota with the following men on the executive committee: Dr. F. R. Smyth (chairman), Dr. C. J. McGurran (secretary), and Drs. Paul Sorkness, G. M. Williamson, and H. J. Rowe.

Dr. F. C. Rodda, of Minneapolis, was asked to address the business men of Brainerd last month on the subject of a pure milk supply. Dr. A. W. Ide, chairman of Health and Sanitation Committee of the Brainerd Chamber of Commerce, announced that a survey of the field would be made, and a campaign of education begun.

The American Red Cross at Washington urge all men, physicians in particular, to call the attention of nurses to the urgent need of competent nurses for our sick and wounded men. Physicians are earnestly requested to send their patients to hospitals, and not to encourage the employment of a nurse for a single patient.

Stenographers are urged by the U. S. Civil Service Commission to enter the Government service as a public duty; and physicians who can spare their stenographers should urge them to tender their services for Government work. Application-blanks can be had at the post-office or customhouse in any of our larger cities.

Dr. F. E. Haynes, of Minneapolis, was connected with the City Health Department for several years. He entered the M. R. C. early in the war. After six months' work at Fort Riley, he was made a captain, and then went to France.

Word is now received that he has been made major, and expects to be soon commissioned lieutenant colonel.

Governor Frazier, of North Dakota, has appointed the following members of the State Board of Medical Examiners: Dr. H. O. Altnow, Mandan (re-appointed); Dr. H. G. Woulat, Grand Forks; and Dr. Francis Peake, Jamestown. The two former were recommended by the State Medical Association, but the latter was not, but was the Governor's choice.

In the report of Miss Catherine Johnson, a registered nurse, who as country school nurse visited 115 rural, 97 city or village, and 3 parochial schools in Redwood County (Minn.) the following interesting facts were elicited: 4,076 children were examined, over 2,400 of whom showed one or more physical defects, most of which needed the attention of a physician.

Two hundred and two, just one-third, of the medical men in North Dakota have received or applied for commissions in the M. R. C.—a splendid record. Dr. F. R. Smyth, chairman of the Executive Committee in this work, says every physician in North Dakota will be enlisted in either the M. R. C. or the V. M. S. C., and be ready to do the service that most needs him.

The Supreme Court of North Dakota has confirmed the verdict of \$7,500 in a malpractice suit against Drs. Fred E. and John Ewing, of Kenmare, N. D. The suit was defended by two medical insurance companies. The case raised several questions of law new in North Dakota, and the decision of the Supreme Court seems not to have followed decisions on the same points in several other states.

Dr. St. John Perry, of Minneapolis, who is detailed by the Surgeon General's office to enlist and examine men for the M. R. C., received and examined sixteen physicians at the annual meeting at Duluth of the Minnesota State Medical Association. Many physicians do not seem to know that they are subject to draft the same as any other man, and to be put into regular military service as common soldiers. They are exempted, however, if they have volunteered for service in the M. R. C.

Major Frank E. Burch, of St. Paul, has been assigned to command the base hospital at Camp Dodge, and it is probable that he will soon be advanced to the rank of lieutenant colonel, the rank held by the late Dr. Frank C. Todd, who was in command of the hospital at the time of his death. Colonel Miller, who held the position temporarily, has been transferred to Washington.

RECENT NEW ASSIGNMENTS OF NORTH-WESTERN MEDICAL OFFICERS

Minnesota—

To Camp Dodge, Iowa: Capt. F. W. Spicer, Duluth; Capt. A. W. Hilger, St. Paul; Lieut. M. R. Sathe, Jackson, and Lieut. K. C. Wold, St. Paul.

To Camp Custer, Mont.: Capt. E. H. Hammes, St. Paul.

To Camp Cody, N. M.: Capt. O. H. Wilcox, Minneapolis.

To Camp MacArthur, Texas: Lieut. F. W. Whitmore, St. Paul.

To Ft. Oglethorpe, Ga.: Major H. McL. Morton, Minneapolis; Lieut. H. N. Meleck, Minneapolis; Lieut. H. N. Klein, St. Paul; Lieut. B. Ravny, Windom; Capt. J. R. Kuth, Duluth.

To St. Paul, as medical aide to the Governor: Capt. A. MacLaren, St. Paul.

To Fort Riley, Kas.: Capt. H. K. Schmidt, Minneapolis.

To Camp Zachary Taylor, Ky.: Lieut. F. Kunce, St. Paul.

Montana—

To Fort Riley, Kas.: Lieut. M. Hopkins, Gildford; Lieut. R. R. Frizzell, Great Falls; Lieut. W. K. Smith, Stockett.

To Camp Fremont, Calif.: Lieut. W. G. Palm, Joplin.

To Western Department for orders: Capt. L. Bernheim, Butte.

North Dakota—

To Camp Custer, Mich.: Lieut. R. A. Scott, Crystal.

To Camp Dodge, Iowa: Capt. J. A. Carter, Warwick.

To Fort Riley, Kas.: Lieut. W. C. Aylen, Mandan; Lieut. O. T. Benson, Glen Ullin.

To Fort Sam Houston, Texas: Lieut. A. Dean, Grand Forks.

South Dakota—

To Camp Dodge, Iowa: Lieut. A. S. Jackson, Lead.

To Fort Oglethorpe, Ga.: Lieut. B. C. Murdy, Aberdeen; Lieut. L. J. Brookman, Vermilion.

To Fort Sam Houston, Texas: Lieut. F. H. Creamer, Dupree.

To Central Department for orders: Capt. J. F. Barthell, Winfred.

TRANSFERS

MINNESOTA OFFICERS

Lieut. W. B. Martin, Fergus Falls, from Washington, D. C., to Ann Arbor, Mich.

Capt. F. P. Moersch, Minneapolis, from Camp Devens, Mass., to Camp Crane, Pa.

Capt. C. E. Connor, Minneapolis, from Camp Dodge, Iowa, to Camp Crane, Pa.

Lieut. L. M. Keene, Alexandria, from Jefferson Barracks, Mo., to Camp Crane, Pa.

Lieut. G. Brelsford, State Sanatorium, from Fort Thomas to Azalea, N. C.

Lieut. H. L. Hullsick, St. Paul, from Fort Oglethorpe, Ga., to Camp Grant, Ill.

Capt. B. A. Camp, Albert Lea, from Camp Servier, S. C., to Fort Oglethorpe, Ga.

Lieut. P. Blanco, Rochester, from Army Medical School to Washington, D. C.

Capt. A. J. Wentworth, Mankato, from Memphis, Tenn., to Camp Crane, Pa.

Lieut. P. R. Ilanke, Cannon Falls, from Camp Pike, Ark., to Camp Custer, Mich.

Lieut. D. Horonsend, Belgrade, from Fort Oglethorpe, Ga., to Camp Forrest, Ga.

Lieut. O. A. Groebner, New Ulm, from Camp Devens, Mass., to Camp Fremont, Calif.

Lieut. H. C. McIntosh, St. Paul, from Camp Zachary Taylor, Ky., to Camp Sherman, Ohio.

Lieut. C. J. McGuire, Altura, from Camp Dodge, Iowa, to Camp Wadsworth, S. C.

Lieut. A. Gullixson, Bricelyn, from Camp Dodge, Iowa, to Camp Wadsworth, N. C.

Lieut. M. Scham, Minneapolis, from Camp Dodge, Iowa, to Camp Wadsworth, N. C.

Lieut. B. S. Bohling, Sandstone, from Camp Greene, N. C., to Fort Banks, Mass.

Capt. J. F. Lynn, Waseca, from Fort Oglethorpe, Ga., to Fort Snelling, Minn.

Capt. W. C. Chambers, Blue Earth, from Camp Greene, N. C., to Hoboken, N. J.

Lieut. U. R. Wilson, Brainerd, from Fort Oglethorpe, Ga., to Hoboken, N. J.

MONTANA OFFICERS

Lieut. W. G. Nye, Great Falls, from Camp Lee, Va., to Camp Meade, Md.

NORTH DAKOTA OFFICERS

Lieut. F. I. Darrow, Fargo, from Camp Pike, Ark., to Camp Beauregard, La.

Capt. J. P. Aylen, Fargo, from Camp Wadsworth, N. C., to Hoboken, N. J.

Lieut. W. P. Cowper, Michigan, from Fort Oglethorpe, Ga., to Hoboken, N. J.

SOUTH DAKOTA OFFICERS

Lieut. A. F. Grove, Dell Rapids, from Camp Grant, Ill., to Camp Crane, Pa.

Lieut. L. J. Brookman, Vermilion, from Boston, Mass., to Fort Oglethorpe, Ga.

COMMISSIONS ACCEPTED IN THE M. R. C.

BY MINNESOTA PHYSICIANS

Dr. A. E. Amundsen, McIntosh; Dr. A. W. Drew, Swanville; Dr. T. Gratzek, St. Paul; Dr. C. E. Fawcett, Stewartville; Dr. J. Finberg, St. Paul; Dr. M. M. Ghent, St. Paul; Dr. E. L. Hall, Russell; Dr. E. M. Hammes, St. Paul; Dr. J. R. Manley, Duluth; Dr. A. G. Moffatt, Howard Lake; Dr. A. H. Parks, Minneapolis. Dr. A. Peterson, Rochester; Dr. W. E. Richardson, Slayton; Dr. F. H. Rollins, St. Charles; Dr. R. B. J. Schock, St. Paul; Dr. F. W. Spicer, Duluth; Dr. H. H. Warner, St. Paul; Dr. C. C. Walter, Lamberton.

BY MONTANA PHYSICIANS

Dr. E. C. Anderson, Missoula; Dr. W. I. Firey, Roundup; Dr. J. R. McDowell, Intake; Dr. L. Stevens, Laurel.

BY NORTH DAKOTA PHYSICIANS

Dr. L. B. Greene, Edgerley; Dr. G. P. Shepard, Jamestown.

BY SOUTH DAKOTA PHYSICIANS

Dr. W. I. Maytum, Alexandria; Dr. R. G. Stevens, Sioux Falls; Dr. G. R. Willy, Kimball.

STOCK FOR SALE

Ten shares of common and 10 shares of preferred Standard Medical Supply Company stock for \$900 cash if taken at once. Address 143, care of this office.

LOCUM TENENS WANTED

Locum tenens wanted for period of three or four weeks beginning September 20. General country practice in a small town seventy-five miles from the Twin Cities. Will pay cash or give percentage. Address 144, care of this office.

PHYSICIAN WANTED

A physician is wanted in a town of 450, situated in a rich wheat country on the Red River. Nearest physicians 17 miles east and 17 miles west and 22 miles south. Our physician left to join the Medical Reserve Corps two weeks ago. Address 145, care of this office.

OFFICE FOR RENT AND EQUIPMENT FOR SALE

Suite of four rooms. X-ray machine, etc. Will go into army. Practice of about \$6,000 per year. Town of 20,000. Address 142, care of this office.

ASSISTANT WANTED

A Scandinavian physician (draft exempt) as assistant in a large surgical and general practice; good income, with permanency for one qualified. Must be good mixer and worker. State full particulars; begin in four weeks. Address 141, care of this office.

ELECTRIC INCUBATOR WANTED

We desire to purchase an electric incubator for bacteriological purposes. State price desired. Address 146, care of this office.

LOCATION WANTED

A young physician, who is capable, experienced, and exempt from draft, desires a good location for practice either in Minnesota or North Dakota. Address 147, care of this office.

LOCUM TENENS OR ASSISTANT WANTED

In a 16-bed hospital in the county seat in a rich farming community of Southern Minnesota. Must be able to do some major surgery; refraction desirable.

One partner is in the M. R. C. and the other will enter the service soon. Good opportunity for the right man. Preference given to man discharged from service for physical inability, if able to do the work. Address 148, care of this office.

MISCELLANY

"SPANISH INFLUENZA"

Reports from Europe during the past few months have stated that there has been extensive epidemic prevalence of a disease resembling influenza. Many thousands of cases are said to have occurred in Spain (attacking nearly one-third of the population), Germany, and England. On this side of the water, Cuba was visited, during June last, by a similar epidemic

which was stated to have affected one-quarter of the population of Havana, but not a single death resulted. In Spain, however, about 700 deaths are said to have been caused by the outbreak.

The symptoms reported, fever, general aching of joints and head; catarrh of conjunctival, nasal and bronchial mucous membranes, usually ran their course in about three days, without serious results.

Reports from Spain state that, in the majority of cases examined bacteriologically, a streptococcus and a Gram-negative diplococcus of what is known as the catarrhalis type were found. The organism has also been described in Spanish reports as a parameningococcus.

It is evident that before we know definitely what the disease is or even whether all the cases of illness reported can be ascribed to the same organism, we must await reports of further investigations.

The newspaper report of an outbreak of this so-called "Spanish Influenza" upon a Norwegian steamer arriving here and of a number of deaths therefrom was accompanied by the statement of the physicians of the hospital, wherein all cases reaching port had been treated, that the disease was lobar or broncho-pneumonia, so that we have no evidence that the illness was due to the same infectious agent as that causing the European epidemic.

The public has no reason for alarm since, through the protection afforded by our most efficient quarantine station, and the constant vigilance of the city's health authorities, all the protection that sanitary science can give is assured. The very mildness of the disease, as reported in Europe, is, in itself, assurance against anxiety on this side of the water.

Our troops in France, so far, have escaped attack by this "influenza," although those of both Britain, France and Germany have suffered. This immunity has been ascribed to the great resistance to disease which well-fed, healthy individuals offer.

THE IMPORTANCE OF NURSING AT THE BREAST EMPHASIZED BY THE MINNESOTA STATE BOARD OF HEALTH AND BOARD OF CONTROL

The following resolution is self-explanatory, and was taken by the above-named boards in public interest:

WHEREAS, the death-rate of infants under one year of age is considerably higher among those infants who are artificially fed;

WHEREAS, the health and well-being of infants under one year of age is dependent in large measure upon proper nursing at the breast of the mother; now, therefore, be it

Resolved by the State Board of Health and by the State Board of Control that no patient shall be received by or under the supervision of either of said boards on any basis other than that the mother shall nurse her own child so long as she shall remain under the care of said person, hospital, or institution.

Provided that where nursing by the mother is impossible for any physical reason, exception to the above rule may be made by the State Board of Health, or by the State Board of Control acting upon proper medical advice.

DEATHS REPORTED TO THE STATE BOARD OF HEALTH OF
MINNESOTA FOR THE MONTH OF JUNE 1918

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Ada	1,253	1,432	0															1
Albert Lea	4,500	5,193	2															2
Alexandria	3,681	3,001	1															
Anoka	3,769	5,972	1															
Austin	5,474	6,960	1															
Barnesville	1,326	1,353	1															
Bemidji	2,183	5,099	2			1										1		
Benson	1,525	1,677	1															
Blue Earth	2,900	3,319	1			1												
Brainerd	7,524	8,526	1			1										2		2
Breckenridge	1,282	1,840	1															1
Canby	1,100	1,528	1															
Cannon Falls	1,239	1,385	1															
Chaska	2,165	2,050	1															
Chatfield	1,426	1,226	1															
Cloquet	3,074	7,031	9	2		1										1		1
Crookston	6,359	7,559	11	1	1											1		1
Dawson	2,962	1,318	4			1										1		1
Detroit	2,960	2,807	1															
Duluth	52,968	78,466	76	7		7	1						1		3	3		12
East Grand Forks	3,077	2,533	1															
Ely	3,572	3,572	4			1												
Eveleth	3,752	7,036	2			1									1			
Fairmont	3,740	4,958	5															
Faribault	7,868	9,001	5					1										1
Fergus Falls	6,072	6,887	1												1	1		
Glencoe	1,788	1,788	1															
Glenwood	1,116	2,161	3	1														
Granite Falls	1,454	1,454	0															
Hastings	3,811	3,983	3			1									1			
Hutchinson	2,495	2,368	3															
International Falls		1,487	5												1		1	
Jordan	1,270	1,151	1															
Lake City	3,142	3,142	1													1		
Le Sueur	3,937	1,755	2	1														
Little Falls	5,774	6,078	7	1												1		
Luverne	2,223	2,540	2															
Madison	1,336	1,811	1															
Mankato	10,559	10,365	17	1		1									1	2		3
Marshall	2,088	2,152	3															1
Melrose	2,591	2,591	2			1										1		
Minnneapolis	202,718	301,408	322	31	4	17	3	2	8		6	1	1		8	21	2	24
Montevideo	2,146	3,056	5			1												
Montgomery	979	1,267	2			1										1		
Moorhead	3,730	4,840	7	1														2
Morris	1,934	1,685	0			2												
New Prague	1,228	1,554	4															
New Ulm	5,403	5,648	7															
Northfield	3,210	3,215	1															
Ortonville	1,247	1,774	1															
Owatonna	5,561	5,658	6						1							1		
Pipestone	2,536	2,475	2			1												
Red Lake Falls	1,666	1,666	1															
Red Wing	7,525	9,048	10	1												2	1	
Redwood Falls	1,661	1,666	1															
Renville	1,075	1,182	0															
Rochester	6,843	7,844	47	1	4	2										4		1
Rushford	1,100	1,011	0															
St. Charles	1,304	1,159	0															
St. Cloud	8,663	10,600	20	1	1	2									1	1	1	3
St. James	2,102	2,102	2															
St. Paul	163,632	214,744	204	19	4	16	8				3	1			4	16		17
St. Peter	4,302	4,176	3	1														
Sauk Centre	2,154	2,154	3															
Shakopee	2,046	2,302	3														1	
Sleepy Eye	2,046	2,247	0															
South St. Paul	2,322	4,510	4	1			1											1
Staples	1,504	2,558	2															
Stillwater	12,318	10,198	5	1														
Thief River Falls	1,819	3,174	1												1			
Tower	1,111	1,111	1	1														
Tracy	1,911	1,826	3								1							
Two Harbors	3,278	4,990	6										2			1		
Virginia	2,962	10,473	9		1	2												1
Wabasha	2,622	2,622	3													1		1
Warren	1,276	1,613	2															1
Waseca	3,103	3,054	1															
Waterville	1,260	1,273	0															
West St. Paul	1,830	2,660	1															
Willmar	3,409	4,135	5					1										
Winona	19,714	18,583	15	2												2		1
Winthrop	813	1,043	0															
Worthington	2,386	2,386	6													2	1	

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	0															
Aitkin	1,719	1,633	0															
Akeley			0															
Appleton	1,184	1,221	2															1
Belle Plaine	1,121	1,204	2												1			
Biwabik		1,690	2					1										
Bovey		1,377	3	1	1													
Browns Valley	721	1,058	0															
Buffalo	1,040	1,227	1															
Caledonia	1,175	1,372	1													1		
Cass Lake	546	2,011	0															
Chisholm		7,684	3												1			1
Coleraine		1,613	1															1
Delano	967	1,031	0															
Farmington	733	1,024	1															
Fosston	864	1,055	1															
Frazee	1,000	1,645	2															
Grand Rapids	1,428	2,239	1															
Hibbing	2,481	8,832	10												2			2
Jackson	1,756	1,907	2													1		
Janesville	1,254	1,173	3															1
Kenyon	1,202	1,237	1															
Lake Crystal	1,215	1,038	1															
Litchfield	2,280	2,333	4													2		1
Long Prairie	1,385	1,250	1															
Madelia	1,272	1,273	1													1		
Milaca	1,204	1,102	1												1			
Mountain Lake	959	1,081	0															
Nashwauk		2,080	1															
North Mankato	939	1,279	0															
North St. Paul	1,110	1,404	2															1
Osakis	917	1,013	0															
Park Rapids	1,313	1,850	1															
Pelican Rapids	1,033	1,019	2															
Perham	1,182	1,376	4															2
Pine City	993	1,258	1															
Plainview	1,038	1,175	3			1											1	
Preston	1,278	1,193	1															
Princeton	1,319	1,555	4														1	
St. Louis Park	1,325	1,743	1					1										
Sandstone	1,189	1,818	0															
Sauk Rapids	1,391	1,745	2			1												
South Stillwater	1,422	1,343	1															
Springfield	1,511	1,482	1															
Spring Valley	1,770	1,817	0															
Wadena	1,520	1,820	6	2														
Wells	2,017	1,755	0															
West Minneapolis	2,250	3,022	1	1														
Wheaton	1,132	1,300	1															
White Bear Lake	1,288	1,505	0															
Windom	1,944	1,749	1															
Winnebago City	1,816	2,555	1															
Zumbrota	1,119	1,138	0															
STATE INSTITUTIONS																		
Anoka, Asylum			2															
Faribault, School for Blind			0															
Faribault, School for Deaf			0															
Faribault, School for Feeble Minded			2	1														
Fergus Falls, Hospital for Insane			16	5		2										1		
Hastings, Asylum			4			1												
Minneapolis, Soldiers' Home			3			1												
Owatonna, School for Dependents			1															
Red Wing, State Training School			0															
Rochester, Hospital for Insane			13	1		1												
Sauk Centre, Home School for Girls			0															
St. Peter, Hospital for Insane			14	4		1												
St. Cloud, State Reformatory			0															
Stillwater, State Prison			0															
OTHER PARTS OF STATE			661	65	10	33	6	2	6	1	14	1	....	2	18	48	2	79
Total for state			1745	158	29	99	21	7	14	1	24	3	4	2	45	125	10	167

*No report received. REGISTRAR not doing his duty
123 stillbirths not included in above totals.



Oats Are Twice as Nutritious

Oats are twice as nutritious as lean beef, yet they cost about one-eighth as much.

The figures are—in calories

Oats 1810 per lb.

Round Steak 890 per lb.

Eggs 720 per lb.

Each large package of Quaker Oats—costing 32c—will save about \$2 if served in place of meat.

It contains as many food units as 89 eggs.

It is rich in minerals—the richest of all grains in iron.

We believe that people should know this. It will help them save wheat, save meat and save money, and still be better fed.

Quaker Oats

The oat dish is delightful if Quaker Oats is used. This brand is flaked from queen oats only—just the rich, plump oats. We get but ten pounds from a bushel. It supplies the cream of the oats and the maximum flavor without extra price.

The Quaker Oats Company

CHICAGO

PUBLISHER'S DEPARTMENT

THE BEEBE LABORATORIES

This paper is a hearty believer in and advocate of the professional public laboratory, and hopes to see the day when every physician will use this great and indispensable aid for diagnoses and often for treatment. The physician who does use such aid is on a higher professional plane than the man who does not, and the public will soon take notice of the fact.

Among the excellent laboratories now on a firm footing with the medical profession, both in the East and the West, is that conducted by Dr. Beebe of St. Paul, under the name of the Beebe Laboratories.

The service of the laboratories is now a twenty-four hour service, in order to eliminate delay when promptness is essential, and delay is disadvantageous or dangerous.

The work of these laboratories embraces all lines of routine and research examination called for in modern scientific medicine.

MUDBADEN

This institution, which has been in successful operation for the past seventeen years, announces its work in a modest way, such work being the treatment of the various forms of arthritis, neuralgia, neuritis, and allied diseases. It has a new building, is under new management, and follows approved methods.

Every intelligent physician knows of the excellent results, some only temporary, but many permanent, following the sulphur-mud treatment, with accompanying hot baths and rest. The conductors of Mudbaden, at Jordan, Minn., seek patients referred by physicians, and earnestly desire the co-operation of physicians in the treatment of such referred patients.

Mudbaden is under the general management of Mr. A. L. Johnson, with a Medical Director, Dr. Frank W. Mackoy, of excellent professional standing and long experience in such special work.

THE MECHANICS OF CONSTIPATION

The abuse of laxatives at the hands of medical men has been only second to their abuse in the hands of laymen; and it is high time that professional attention be directed to "the mechanics of constipation" in order that the abuse of laxatives may be abolished.

Constipation is due to a number of causes, not a few of which may be removed by proper habits aided by a moistening and lubricating material which only acts upon the hardened feces without disturbing the stomach or bowel contents in an unnatural way.

Such a moistening and lubricating material has been produced by the Therapeutic Department of the Standard Oil Co., and is called "Nujol," and the Company has established the Nujol Laboratories for its manufacture and distribution. The literature of the Nujol Laboratories on constipation should be in the hands of every physician. The Laboratories have offices at 50 Broadway, N. Y.

SUPPORTERS AND ABDOMINAL BELTS

The Battle Creek (Michigan) Deformity Appliance Co. calls the attention of obstetricians and, indeed, of

general practitioners and surgeons, to its abdominal belts for men and women and particularly to its supporter for the relief of sacro-iliac luxation.

The literature of the Company will interest any medical man, and can be had upon application by postal card.

H. A. METZ LABORATORIES, INC.

On July 1st, 1918, I transferred the business of the Pharmaceutical Department of the Farbwerke-Hoechst Company to the H. A. Metz Laboratories, Inc.

The Federal Trade Commission has granted the Laboratories the licenses for the manufacture of Salvarsan, Neo-salvarsan, and Novocain, formerly held by the Farbwerke-Hoechst Company, and these products in the future will be manufactured and marketed by the H. A. Metz Laboratories, Inc.

Although the Farbwerke-Hoechst Company is a New York State corporation with no German affiliation other than the sole license to import and handle the products made by the Farbwerke, vormals Meister, Lucius & Bruning at Hoechst, I am sure the elimination of the German name under existing conditions will be gratifying to the American public.

H. A. METZ.

THE NEGLECTED THERAPY OF CONVALESCENCE

The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions as well as the successful management of the more chronic affections are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medicotonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally and to hasten the time when the patient shall be once more "upon his feet." Among all of the general reconstituent and supportive measures in the therapy of convalescence, none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese) in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hematinics in this form, is that digestive disturbance is avoided and constipation is not induced.

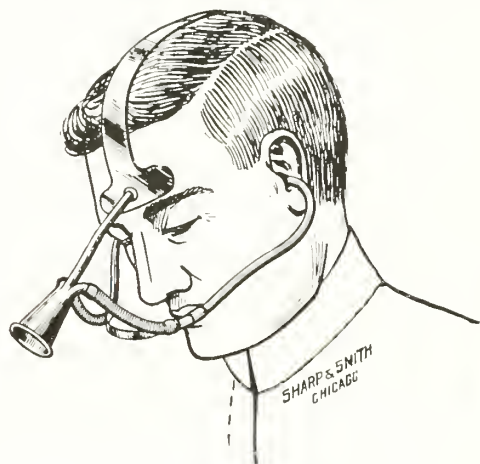
KORA-KONIA

A recent writer has made the statement that the present age will be known to the future history of the world as the beginning of the age of specialism.

The greatest success of modern life is made by those who specialize in some particular branch of endeavor. This is true, not only of mechanics and the arts, but to a certain degree of medicine. There is not only specialism as regards the treatment of various classes

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

65 East Lake St. - - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aenaeobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

and conditions of diseases, but specialism in agents employed in such treatment. A very good example of this may be found in Kora-Konia.

It cannot be denied that there exists always to a greater or less extent a necessity for an efficient dusting or dressing powder. It must be admitted, also, that for such purposes there is a great variety in the choice of agents to be used. On the other hand, as is true also of drugs for internal administration, certain combinations of elements whose action is synergistic may be relied upon to give the most satisfactory results. Kora-Konia is not only a dusting powder, but is such a powder as best meets the indications for such an agent. Its ingredients have been carefully chosen and combined in such proportions as has been found by experience and test to be most efficient. Kora-Konia is made and designed especially for professional use. In the hands of the general practitioner or of the specialist, Kora-Konia may be relied upon to do its work efficiently, satisfactorily, and without any prejudicial action or effect. Probably, a great proportion of physicians know Kora-Konia and use it. To those who do not, a sample of Kora-Konia will be sent gladly on request.

AN EXCEPTIONAL LOCAL ANESTHETIC

When, a little more than a year ago, announcement was made that the scientific staff of Parke, Davis & Co. had achieved the distinction of producing a local anesthetic possessing all of the advantages of similar products then in use, minus the disadvantages peculiar to many of them, the intelligence was received by thousands of American surgeons and physicians with manifest satisfaction. The advent of the new product was propitious. The time was ripe for a truly efficient American-made local anesthetic. And Apotheresine appears to justify every promise that preceded it. There is abundant evidence that the product can be advantageously used in any case in which a local anesthetic is indicated.

Proof of the efficacy of Apotheresine comes from all over the United States. Two examples may be cited: A Minnesota surgeon says that he has used Apotheresine at least eight hundred times and has yet to find a case that shows any toxic symptoms or incomplete anesthesia. He reports seven thyroidectomies, excision of elbow, amputation of arms, legs, fingers, carcinomas, sarcomas, cysts, and all manner of minor work. A New Orleans surgeon reports 250 operations of various kinds, ranging all the way from amputation of the finger to amputation of the breast, without a single failure and with no untoward result.

Comparative tests prove that Apotheresine is as efficient as any synthetic local anesthetic and more potent than most of them. Its toxicity is low, being far less than that of cocaine and no greater than that of the least toxic of other synthetic anesthetics.

Apothesine is supplied in hypodermic-tablet form, as follows: H. T. No. 216, each tablet containing $1\frac{1}{4}$ grains of Apotheresine; H. T. No. 217, each tablet containing $\frac{3}{8}$ grain of Apotheresine and $\frac{1}{600}$ grain of Adrenalin; H. T. No. 218 (dental), each tablet containing $\frac{1}{3}$ grain of Apotheresine and $\frac{1}{2500}$ grain of Adrenalin.

CHLORAZENE

In the number of the *Presse Médicale* for January 31, 1918, Lapersonne advocates the use of Chlorazene as a disinfectant in the treatment of ocular infections, such as purulent ophthalmia and corneal ulcers. He found that this antiseptic gave very successful results and was virtually free from irritating effect even in strong solutions,—in fact he uses it in a concentration of one per cent and sometimes even stronger. However, for ordinary eye-work a solution of 1:1,000 to 1:250 will be found sufficiently strong, and this will give results which cannot be obtained from boracic acid or from the simpler and much feebler antiseptics now generally in use.

Chlorazene is becoming more and more widely used as an antiseptic for virtually all purposes. It is manufactured by The Abbott Laboratories, Chicago, Illinois.

Build up a reserve fund in a Savings Account at the

First and Security National Bank

Capital and Surplus Ten Million Dollars
Marquette Avenue at Fifth Street

We Invite You to Do Your Banking here

WAR SERVICE

Is calling many doctors overseas.

The wife and family and aged parents can be provided for before leaving by proper Savings Accounts.

On a "Joint & Several Account" either party can draw. Upon the death of one the money goes to the survivor without probate, expense or delay.

"Trust Account" provides for the future of a child. The money is under control of the parent during life, payable to the child or guardian upon death of the parent.

ASSETS OVER \$23,000,000.00

Farmers & Mechanics Savings Bank

"The Home of Thrift"

115 S. 4th St.

Minneapolis, Minn.

MATERNITY AND SURGICAL CORSETS A SPECIALTY

Spencer Rejuveno maternity corset especially designed for each separate client, with the abdominal support that may be raised or lowered as required. Gives normal figure, comfort and safety.

Rejuveno Belts for MEN AND WOMEN Sacro Illiac Corsets - - Sacro Illiac Belts

Graduate Corsetieres listed below:

MINNEAPOLIS, MINN.

MRS. E. T. GLAZE, City Manager, Minneapolis

236 La Salle Bldg. Tel. Nic. 7455

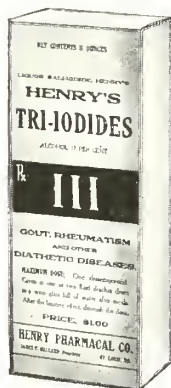
MRS. MAY ROGERS, Tel. Walnut 878

MRS. ALICE BOOTH, Tel. So. 37

MISS ONAH THURSTON, State Manager

MRS. ELIZABETH NOE, Hotel Antlers, Ken. 370; Auto. 51 181

Awarded Gold Medal, highest possible
award, Panama-Pacific Exposition
San Francisco, 1915



TRI-IODIDES (HENRY'S)

LIQUOR-SALI-IODIDES--8 oz. Bottles, Price \$1.50

Valuable in acute or chronic diseases of the bones and joints, rheumatism, gout, syphilitic blood taint, eczema, psoriasis and all dermic disorders in which there is an underlying blood impurity.

SPECIAL NOTICE TO PHYSICIANS.

We will send an Original Bottle, \$1.50 size, *Tri-Iodides* to any Physician who will send us 30c. Express Charges on same. Send Coin Stamps, Express or Money Order.

WRITE FOR BOOKLET.

Henry Pharmacal Co.,

121 Vine Street,
ST. LOUIS, MO.

Bayer-Tablets AND Bayer-Capsules OF ASPIRIN

(5 grs. each)

CONTAIN THE ORIGINAL PRODUCT

Made in the United States since 1904

The trademark "Aspirin" (Reg. U. S. Pat. Office) is a guarantee that the monoaceticacidester of salicylicacid in these tablets and capsules is of the reliable Bayer manufacture.

THE JOURNAL-~~L~~ANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, OCTOBER 1, 1918

No. 19

THE PROBLEM OF STAMMERING AND ITS SOLUTION*

BY ELMER L. KENYON, A. B., M. D.*

CHICAGO, ILLINOIS

INTRODUCTORY REMARKS

It is possible that this war will help to place the subject of stammering more prominently before the medical profession, because stammerers are being produced by war strain in very considerable numbers indeed: and, incidentally, I would like to remark that shock, which is producing stammering in the war, also produced stammering before the war began. As I am addressing some nose and throat men here, I will add that the shock produced by nose and throat men is oftentimes responsible, strange as it may seem, for stammering. Day before yesterday a patient came to me from southern Indiana, who was suffering from stammering due to shock, the shock produced by a nose and throat surgeon. That is interesting. It is not very important. I am not making a great ado about it. I am just pointing to a fact that I think every nose and throat man will be interested in. A stammerer goes to a nose and throat surgeon for advice. Stammerers commonly do. As is very usual, the nose and throat surgeon, or the general practitioner, for that matter, is prone to advise the removal of adenoids or tonsils. That never cures stammering, but it sometimes produces stammering. I have seen within the last year three stammerers produced by nose and throat operations upon adenoids and tonsils.

The honored and venerable Dr. Alexander Graham Bell recently spoke with much feeling of the struggles and discouragements of the men and women who, in his early pioneer days, fought to establish on a scientific basis the principle of teaching the deaf mute to talk, and to "hear with the eye." Developed from those early struggles, one now sees a large and still growing nation-wide system of special schools

and special classes for teaching the deaf mute to talk and the deaf generally to read the lips. In days to come, the medical profession will, I venture to prophesy, look back with a feeling of strangeness at the ignorance of the past which caused physicians to leave persons afflicted with serious disorders of speech to the exclusive treatment of laymen, and will look with considerable satisfaction upon those pioneers in their profession who struggled to place the subject on a scientific foundation. The effort that sets out to solve the terrible predicament of more than one hundred and fifty thousand persons in the United States alone is not unworthy of study, especially since a national movement is already under way. Clear realization of aims and purposes is necessary for the right guidance of this movement. And every community must eventually become involved.

THE PROBLEM

First, then, let us try to understand what the problem of stammering is. Suppose that we were, in imagination, to set apart for intelligent observation the stammerers in a community of one hundred thousand persons. Such a group would number from four hundred to one thousand stammerers. All walks of life would be represented: also all ages, from the beginnings of speech to the relatively thinned-out ranks of the later years of life. The male persons would exceed the female in the proportion of about 7 to 1.

The obvious and distinguishing fact about

*Presented by invitation before the South Dakota State Medical Association at Mitchell, S. D., May 23, 1918.

stammerers is their haltings and hesitations and stumblings in speech. These may consist only of light repetitions of the first sound of the word, perhaps scarcely observable, but yet very embarrassing to the stammerer himself. But the manifestations often mount up to holdings, in some part of the speech region, even to the intensity of firm tonic spasm so severe and prolonged as to render actual talking impossible. The very worst may be compelled to carry a writing tablet in order to make themselves understood.

While this outward difficulty with the speech is the obvious fact about stammerers, the deeper fact, just as characteristic and distinguishing, is an inward emotional disturbance. This combination of emotional perturbation with physical spasmodic abnormality of speech characterizes the disorder. The one does not, in my judgment, occur without the other.¹ Stammerer or stammering can be understood only as one explores this emotional phenomenon. It varies much in intensity at different times and in different individuals. It is always associated with a feeling of embarrassment in respect to the stammerer's speaking relationship to those in the immediate social group.

The question as to whether the emotional disturbance is causal of the peripheral spasmodic phenomena, or the emotion is merely the embarrassment resulting from the peripheral disturbance, has been much discussed. The author believes that both conditions exist: that the stammering finds its inciting cause in the social emotion present, and the social emotion is also much augmented by the embarrassment resulting from the peripheral phenomena. The causal explanation of stammering, in the author's judgment, lies in a disturbance of the nervous-control apparatus of the peripheral mechanism of speech, incited by social emotion; while the remarkable complexity of muscular action required for speech probably has an important bearing on the incitation of the disorder. A more detailed statement of this theory cannot here be presented; but it may be remarked that any true explanation of the nature of stammering must consider closely the point of contact between the psychoneurological processes of speech and the complexity of the muscular phenomena required for speech. In this connection it will be well to recall that no constant or characteristic ana-

tomical imperfection of either the cerebral, the nervous, or the peripheral organs related to speech is known to be present.

Nothing is more characteristic of stammering than its irregularity of manifestation. When the stammerer is entirely alone his tendency to stammer is ordinarily in complete abeyance; but let a second person break in on this seclusion, and the stammering returns. Circumstances which tend to increase emotion excite or increase the stammering. A young drafted soldier, who ordinarily stammered very little, found himself, while on sentinel duty at the training camp, completely unable to utter the single word of command, "Halt!" The emotion resulting from the sense of responsibility completely upset for the moment the normal physiological processes of speech.

In origin, in spite of well-known exceptions, stammering is characteristically a developmental disorder. Probably more than 90 per cent of the cases originate between the second and the sixth year of life. At this period neither the mental processes, the emotional processes, nor the muscular processes relating to speech have attained to fixedness of function; every thought and act is the creature of undeliberate and unanalyzed impulse, and the physical processes of speech are step by step feeling out their experimental paths that lead to final truthfulness of action. An exception to this developmental origin is the relatively occasional case, the condition arising later in the young life, most probably from severe fright. The cases of imitation are also developmental.

The stammerers of our imagined group find themselves seriously misunderstood by normally speaking persons. They find themselves, to a serious degree, looked upon as human oddities and legitimate subjects for joking. Two facts are often misunderstood: the personality of stammerers and the seriousness of their affliction. Behind the stammering is the stammerer. Because of the oddity of his speech people often reason that the personality of the stammerer must be freakish. But, on the contrary, except for the effect on character resulting from the stammering, the stammerer does not differ from other people. His worst fundamental peculiarity is a certain excitableness or emotionalism, or both, but this is not more than is seen in non-stammerers in many times greater numbers. His intellectual capability tends to mount above the average. Because of his sufferings, he is apt to be especially sympathetic and likeable.

1. But in advanced years, and also on certain occasions in younger stammerers, a definable emotion may be absent. In such cases a habit of years is dominating the situation.

Behind every instance of stammering is the stammerer, a human being possessing sensibilities and aspirations and life necessities. When one has, over and over, witnessed the great dread of stammering children, and young men and women, and even adults, to come into association with their fellows—when one has seen young men and women shrink away from completing their high-school and college education, or has witnessed them frequently in tears because people smile, or has seen rugged men sob at the thought of their sufferings and failures; when one has seen young men drift into sad, secluded, protected and unaggressive lives; when one has witnessed careers ordinarily promising to their owners fizzle out into dismal failures—when, in short, one has realized how the life of a stammerer is so much more full of suffering and struggle than that of non-stammerers, he feels no disposition to laugh at these sufferers. It is the duty and the privilege of the medical profession to understand these sufferers and to become their protectors. No one who understands takes their affliction lightly, or doubts the seriousness of their problem.

THE PRESENT SITUATION

Under present conditions what really becomes of the army of from four hundred to one thousand stammerers, who represent the ordinary burden of every community of one hundred thousand persons? When they turn to the medical profession, where they have a real right to expect assistance, they are met with little else than ignorance of their problem. The present-day advice of the medical profession to the stammerer is, speaking of the profession as a whole, a great deal more harmful than no advice at all. The panacea of the family physician these days, when approached by parents for advice concerning their stammering children, seems to be, "Oh, let him alone; don't worry; he will eventually grow out of it." A few do grow out of it; but nearly all, evidently not appreciating this sage advice, grow deeper into it.

Relatively few stammerers reach the conscientious intelligent treatment that is offered very sparingly in different parts of the country. But most of those who receive treatment drift easily and naturally into the widely opened arms of the flamboyantly advertising commercial pretenders, who are informed only crudely concerning the nature of the disorder or of its proper treatment, even if their efforts are sincere. Gutzmann, whose right to speak on stammering is unquestioned,

says, "In no field, with possibly the sexual field excepted, does swindle and quackery bloom as in the field of stammering."²

Most stammerers struggle along as best they can without treatment, and suffer the long-drawn-out consequences. With the experience and maturity of the advancing years the tendency to stammer grows less and less, until towards middle life, or later, it has, with painful slowness perhaps, practically disappeared. A conspicuous failure in the present situation is the utter disregard of prophylaxis, for the great hope of any adequate mastery over the problem lies in stemming the development of the disorder before it has become deeply rooted in the individual consciousness and personality.

LOCATING THE PROBLEM

But whose problem is it? We may say it is the problem of those who can and will solve it. But who can solve it? In this country the problem has been approached almost solely by laymen. If the flamboyant advertisements of commercial "schools" for stammering were true or even half true, inroads would have been made on the problem generations ago. As a matter of course, however, one should not look to the solution of complex and difficult scientific problems by half educated and unscrupulous business promoters. The problem has been approached also by laymen who are not unscrupulous and who, in non-medical directions, are educated. The teacher of elocution or of voice-training, the teacher of the deaf mute, and the trained psychologist are examples of the sincere laymen who have approached the problem.³

If sincerity were alone needed to solve complex human problems their solution would be easily at hand. Such solution depends, not alone on general intelligence, but rather on intelligence coupled with education deep enough and varied enough to cover the elemental knowledge factors involved in the problem. The failure of every such lay effort is due to the narrowness of the educational approach to the problem. For example, the etiological basal factors are beyond the reach of lay workers; therefore the half-educated individual approaches the problem in a

2. Within a year the names of prominent physicians have appeared in a large daily newspaper advertisement as references for a "stammering school" whose methods are so superficial and confused as to be almost negligible, so antiquated as to savor of a long past generation, and so morally questionable in business methods as to at once arouse the suspicion of any thoughtful person.

3. That all of these have not been sincere, or, if sincere, have not been ordinarily intelligent, is indicated by the efforts of at least one of them at the present time to undertake treatment by correspondence.

half-way manner. The pure psychologist perhaps ignores the peripheral physical aspects of the problem. The teacher of the deaf mute may have little or no conception of the psychology involved or of voice-training, and the voice-trainer may not understand the psychology involved, or the peripheral physiology of speech. And none have a thorough understanding of the etiological and pathological possibilities on either the psychic or the physical side. It is not to be wondered at that little fundamental progress in the solution of the problem has been made by laymen.

It often happens that laymen get a glance of the light which has been thrown on the treatment of stammering, but, having little insight into the fundamental reason for the measures learned, they apply these measures carelessly or mechanically or so unintelligently as largely to offset their value. It happens, also, on the other hand, that some laymen have had excellent and careful training and have grasped the treatment problem with excellent intelligence.

But in respect to narrowness of education the lay workers for stammerers are by no means alone, for the same fault must also be laid at the door of the medical profession. If the neurologist slurs the laryngological field, both as to physiology and pathology, and if the laryngologist slurs the psychoneurological field, and if both slur the great fields of voice-training and speech-training, they are on much the same narrow plane of partial competence as the layman. No effort has fallen more flat, for example, than the pure psychoneurological treatment of stammering. Moreover, at the present time, no adequate facilities exist for the especial education of physicians or laymen in this field, while the undergraduate medical schools, with two or three exceptions, ignore the subject altogether.

THE SOLUTION

In approaching the discussion of the solution the first great consideration, as with all complex medical problems, is to keep clearly and prominently in mind the etiological factors. Not only must the study of etiology be continued by those whose education permits of full grasp of the backgrounds of knowledge, but the methods of treatment must be based on etiological conceptions, as they develop. Moreover, all complex projects require for their execution directing minds, capable through training and breadth of knowledge of looking far into the backgrounds and of correlating and unifying to a common purpose and plan all the various knowledge factors involved.

The field is, to be sure, frankly a border-line field, and non-medical persons are destined to play a very large part in whatever is done. But the fundamental need is for physicians whose education is broad and complete for the task to be accomplished. Moreover, the call is for physicians who are disposed frankly to enter into the work itself, not merely to sit on high and direct lay assistants; for, unless the fully trained expert physician himself works in the field, he is not fitted either for directing the work adequately or, especially, for taking up and carrying along the work of etiological and other investigation. Especially is a solution not to be found in the direction of lay workers by physicians uneducated and untrained, or half-educated and half-trained, in this field. Such a plan serves only to bungle the real solution. Why a physician should be able to solve, through lay workers, a problem which he does not understand himself, is hard to understand. If the work of rightly educating and training the stammerer into normal self-control is not worthy the best efforts of thoroughly trained physicians then the treatment of neurasthenia may also well be left to laymen, or the treatment of insanity left to the pure psychologist.

Combining stammering with the other disorders of speech, every large community should be provided with a fully educated speech specialist. He need not confine himself to this field alone, but may well attach it to the field of laryngology and otology or to that of neurology. His fellow-practitioners should be broad enough to stand firmly behind his pioneer efforts. Here certain women physicians, as well as men, may find an especially suitable field for their life-work.

But what is to be the part played by the lay worker? This depends much upon whether physicians respond in sufficient numbers to the opportunity which is theirs by right of education. The field is necessarily medical; and the full domination of the field is possible only to physicians. But the field is very largely educational, and to that extent the educated and trained lay worker is bound to have a large part in it. The local directorship may fall into intelligent hands of laymen, who may depend for aid on the medical profession in the community at large; but the trained physician specialist will always have the deeper and firmer hold, although lay workers will always have a large part in the educational side of speech-work in general.

If such a plan as is here contemplated is to be

carried out, adequate provision for the education, both of physicians and of laymen, must be developed. Such provision does not now exist in completeness. A center for such special education should be developed in connection with one or more great educational institutions. The scope of this educational plan would include all defects of speech. It would offer instruction especially in psychology, neurology, anatomy, physiology, and pathology, in the didactic and clinical study of each speech-disorder, study of the feeble-minded, training in speech development, in voice development, and in hygiene applied to this especial field.

LINEs OF ATTACK

The solution of the problem of stammering, as of other defects of speech, lies, then, fundamentally, in the development of a sufficient number of medical specialists who have been adequately educated in the peculiar directions required for a complete understanding of the problem. Anything short of such a plan is destined to delay and bungle the solution. Such a company of specialists, although very small in numbers, is already in existence in the United States. As the number increases and the work broadens what shall be the lines of attack on the problem?

First of all these speech specialists should be formed into a national association, with provision for at least attendance and co-operation by lay workers. All phases of the subject may here be discussed, and thus the knowledge of the subject be brought to the point of standardization reached by other medical subjects.

The work will tend to divide itself into certain defined efforts, as follows:

1. Prophylaxis.
2. Private treatment.
3. Efforts applied in the public schools.

Prophylaxis offers a most important opportunity, an opportunity which has heretofore been almost wholly overlooked. It will involve certain lines of effort:

- a. Education of all physicians in the undergraduate medical schools with respect to the general phases of the problem.
- b. Education of mothers.
- c. Earliest possible treatment.

The general intelligence of an intelligent medical profession will become infiltrated into the public mind. Physicians will educate mothers directly as to the importance of preventive treatment before a fixed habitual development of the

stammering into the life and speech has been accomplished. The general physician may himself undertake such prophylactic treatment in many cases. The earliest possible expert private treatment will then become more common. Efforts in the schools will be made with much the same idea of prophylaxis.

Each large public-school system will eventually come to have the speech problems of its children under the competent oversight of trained medical speech-specialists, or, at any rate, under the oversight of lay specialists adequately trained in medical centers. The aim of the school work will be to take the stammerer at the earliest possible moment and effectually arrest at that period the progress of the disorder. In some of our cities the public schools have already taken up the problem with reference to their stammering children. It is not my purpose to attempt to analyze how well or how badly the problem is being managed in the schools generally, but, rather, to point out a danger in this direction. Recently the author was approached for a recommendation by an individual who was seeking to become the director of speech-work in the public schools in one of our medium-sized cities; and yet the knowledge of this individual concerning both the nature and the treatment of stammering was worse than puerile, and he seemed to have little desire or aptitude for improving his knowledge. The author cannot say, but from what transpired is led to suspect, that the goal of a position as school director for abnormal speech was attained by this thoroughly unqualified individual. If the schools are to take up the problem under the direction of incompetent directors the solution is to be still further put off and jeopardized.

PRINCIPLES OF TREATMENT

At the present time the conceptions with respect to treatment are far from uniform, even among competent students, but a tendency towards uniformity is developing. When it is realized that a considerable number of individuals succeed in ridding themselves of their own stammering without treatment, through patient efforts at self-control, it will be understood that even the most ill-advised efforts at treatment are bound to succeed in some persons. It is partly by shrewd business methods and partly by reason of this great variability in the seriousness of the disorder, and in the personality of stammerers, that charlatans are able to continue in business; but, generally speaking, stammering eventually

comes to be deeply rooted in the very mental and emotional nature of the individual, and is correspondingly hard to eradicate. So long as present differences in the conception of etiology exist, one cannot look for uniformity in methods of treatment, for one worker emphasizes the psychological aspect of treatment, another voice-training, etc.

The basis of all treatment rests on the principle of educated self-control. Two main concrete avenues of application of this principle are available: one has reference to an educated, conscious application of physiologic control of the peripheral speech mechanism; and the other to subduing directly the nervous and emotional disturbances upon which stammering depends. The younger the child, the less in general is the need, or the possibility, for the employment of complexity of method; for the deeper psychical disturbances are ordinarily matters of development during years of cumulative psychical and physical disturbance.

Certain serious misconceptions with reference to treatment may be attributed to the unfortunate prominence of the unscrupulous advertiser. His "game" usually is to "guarantee" cure within a certain short period, or resulting from a short period of treatment. Thus the idea of a six weeks' period for treatment and cure has come to permeate the lay mind; but stammering is practically never cured in a period of six weeks, unless in very young children. Probably as much as 90 per cent of the stammerers treated by the superficial and careless methods of advertising charlatans are not cured, either in six weeks or six years. The crux of the matter is this: While a period of six weeks is usually sufficient to establish a strong basis of control, the stammerer may need the patient, intelligent, sympathetic oversight of one who he realizes has a clear insight into his psychical difficulties until the tendency to stammer has passed away. This treatment is closely allied to that required over the life of the neurasthenic and has much the same reasons. Its duration varies from three months to one, two, or, rarely, three, or even more years. With such a skilled watchful oversight by one possessing the proper knowledge and personality, permanent cure is possible in almost all cases. In lieu of such expert oversight, the mother or other intelligent adult is often a very practical substitute. It should be stated that without serious and persistent co-operation by the stammerer himself, complete success in treatment is out of the question. One great difficulty is the educa-

tion of parents or adult stammerers to appreciate the necessary conditions of success.

Another misconception with respect to the treatment of stammering has also grown out of the influence of the advertiser,—namely, the idea that stammering is best treated in especial "schools" for stammerers. This idea carries with it, ordinarily, treatment in classes according to a routine. In some large stammering "schools" practically no other method than class treatment is employed. And yet the nature of the disorder is such that, in order to develop the strong character-building control necessary, a strictly personal relationship between physician and patient is almost always necessary. Classes may best be employed only in a limited portion of the work. But the objection to "stammering schools" is more fundamental than the class-system objection. In view of the fact that the abnormal phenomena occur only when circumstances have aroused the social emotion on which they depend, inculcation of the control which leads to cure must go on under the conditions of life necessarily to be lived by the individual. The stammerer may talk without any tendency whatever to stammer in the "stammering school," and yet be practically without control at all in the environment of his ordinary life. Thus it is that the stammerer treated in "stammering schools" practically always has great difficulty in exercising control on returning to the home environment. Such "schools" may be utilized for inculcating a knowledge of how to be controlled, but the development of self-control itself cannot be a "stammering school" matter. The assertion of Alexander Graham Bell that a principle of education was violated whenever deaf mutes were educated outside the environment of normally speaking persons, applies just as certainly to stammerers. The idea that stammering is recoverable, except through disciplinary self-control under the ordinary conditions of life, is a false therapeutic principle. The best manner of approach to the problem is through individual periodic consultations, or consultations in groups of two or three, while the stammerer continues to master the disorder in his home or similar environment.

Two practical questions remain to be discussed:

1. How may the public judge of the worth of individuals or institutions and so avoid deliberate deception? The answer is by inquiring into the scientific professional and moral standing of the individual or institution, rather than by taking

the advertised word of the business promoter. It should be understood that a certain kind of testimonial is as easily obtained by the business agents of "stammering schools" as for patent medicines; also, that "guaranteeing" the cure of stammering is almost as uncertain a business as guaranteeing a cure for pneumonia. The uncertain and uncontrollable elements in the problem are, all the circumstances considered, about as serious in the one case as in the other. How can the patience, perseverance, intelligence, and courage of persons one does not know well be guaranteed? How can one know the difficulties of emotional control until he has thoroughly studied his patient? May one "guarantee" cure in advance without consideration of the persistent tactfulness and insight required by the physician in the individual case, and especially without providing at all for such individual necessity? Let the stammerer beware also of the business promoter who, contrary to business principles, demands a lump sum in advance for a service the stammerer is necessarily unable to judge the

worth or value of. And, finally, let him beware of secrecy as to methods of treatment.

2. In view of the fact that the physician who treats defects of speech is obliged to compete directly with laymen, a new situation with respect to the ethical principle of advertising is brought up. The layman who treats stammering, or the lay institution or even the medical institution that treats stammering, is considered ethically correct in advertising. The standing of such person or institution before the community is in no way impaired by advertising. Whether the organized medical profession should not officially recognize this new situation, and officially sanction the broader use of a professional card in print for this field of service than is now considered good medical ethics in ordinary practice, is an important question. In no other way can a situation of equity between institutions, medical or lay, for the treatment of defects of speech, and the individual physician be brought about. It is a serious blunder to allow inapplicable precedent to block scientific and professional progress.

BORDERLAND CASES, MENTAL AND NERVOUS*

By W. A. JONES, M. D.

MINNEAPOLIS

The word "borderland" covers rather a mixed type of nervous and mental states, conditions, or defects, and therefore may include the recognized hysterias, the so-called neurasthenias, the vampire, the eccentric, the paranoid, the obsessed, and the distinctively mental conditions known as psychasthenia. One can readily see that the analysis of these various types may be more or less imperfect; and that the classification of them is rendered equally difficult unless we go down to the bottom of things and determine by an historical analysis the class to which these various people belong.

The three principal terms used to describe psychoneurological errors are *hysteria*, *neurasthenia*, and *psychasthenia*. In the minds of many medical men these terms are easily interchangeable, and are based upon the old conception of a nervous individual who is afflicted with self-consciousness, self-analysis, and introspection; whereas a closer survey of the whole situation

shows us that these three conditions may be the sequelæ of determinable physical disorders. Simply because an individual is nervous, and we commonly look upon him as a neurasthenic with a little twist in his mind, an introspective analytic state, as a constant complainer, we should not put him in a definite nervous group until we have determined whether he is free from bodily disorder. If he is, and the conclusions are that all of the symptoms are nervous in origin, then he may be put into one of these classes. Now, however, the advanced opinion of the day is that neurasthenia is rapidly declining as a clinical factor, that the greater number of neurasthenics are really suffering from physical disorders or diseases, and that, if these are rectified, the nervous symptoms will disappear.

In order to determine to which class these various borderland cases belong, it is necessary to go back as far as possible in the history; and, if careful search is made, many important facts are brought to light, and justify the conclusion

*Read before the Academy of Medicine (Duluth, Minn., and Superior, Wis.)

that the only cure for many of these psychoneuroses lies in the elimination of the ancestors who have squandered the nervous energies which they should have transmitted to their offspring. That perhaps is the only way in which many of these types can be lessened in number. When one considers that the individual springs from a primal cell, and that this cell has many component parts, each sector of which is finally to represent a fully developed structural tissue, it is remarkable that there are not a greater number of borderland cases; for, if a small portion of the sector in a cell slips its moorings, changes chemically, or is in any way arrested in its growth and development, surely the borderland patient has every reason to believe that he has some real and actual disorder. The cells which are transmitted to the nervous subject from individuals who are unstable, either structurally, physiologically, or chemically, have an inherent tendency to instability and this instability occurs during times when stress and strain is laid upon the individual who has already reached his normal limitations. Perhaps, too, on account of his environment, his education, and his impoverishment, his groundwork is further impaired; and thus, when he attempts anything beyond his possibilities, he breaks and develops into a special type of individual—a true borderland case. It is a well-known fact that these people endure only a definite amount of fatigue, and, when they are forced to undergo strains and activities that are too much for their organism, the nervous system rebels, and, sometimes within an hour or within a few days, the evidences of their instability show that the limitation of service in the nervous system has been reached.

Another important factor has been discussed for the past few years, and that is the influence of the endocrine glands, the so-called ductless glands, of the body. Perhaps a careful study of these glands will aid us in the study of some borderland disorders. It is not uncommon to find a concealed or unidentified thyroid enlargement, or a disorder of the suprarenals. Both glands have a very intimate association and relation, and not infrequently are factors in the production of nervousness, as well as other states of disorder. So far the literature on the subject of the endocrine glands has been exhaustive enough; but it has not arrived at many satisfactory conclusions; and yet we must include them in our investigations, and determine whether they are physical factors in the disordered individual.

Alcohol, syphilis, tuberculosis, and many transmissible diseases are unquestionably responsible for acute nervous and mental cases, that is, multiple sclerosis. It is for us to determine what part they play and how much they involve or impair the functions of the nervous system.

Most every physician believes that he can recognize cases of hysteria, and, from a common point of view, he is able to do so; but not infrequently he is too hasty in his judgment, or has not given sufficient time to physical findings to justify the inclusion or exclusion of hysteria. Hysteria may be diagnosed only when organic diseases are absent and when the study of the individual shows instability, provoking causes, and a peculiar combination of symptoms which are undeniably the property of the hysteric. It must be remembered that Dr. Osler's definition of hysteria still stands, namely, "hysteria is a state or condition in which a morbid idea impairs or controls the functions of the body." Consequently, the hysteric has a multiplicity of symptoms, baseless and irregular in type, while the individual is quite conscious of the dramatical and sensational effects that are being staged for an inquisitive public. It must not be forgotten that hysteria may accompany organic diseases. It is not infrequently found associated with brain tumors and other organic nervous disorders. Then, too, the term *hysteria* should be cautiously employed, and the diagnosis qualified so as to include the organic state, as well as the superimposed hysterical state, that is, tumor of the brain. If we are to still employ the word *neurasthenia*,—and we shall do so for the present discussion,—the same view must be taken of the individual in the making of the diagnosis. Careful research into the history, careful investigation of the bodily functions, a study of the individual during the growing periods, an estimation of how much this individual may attempt to accomplish, and whether more strain and stress is put upon him than his biological state permits, are essential steps to determine whether he becomes one of the types of nervous exhaustion, and is designated psycho-neurotic. If the individual has organic disorders, the physical findings warrant a diagnosis other than neurasthenia, and it is better to make that first and add to it the nervous complement. These nervous-exhaustion cases complain of being nervously tired, they are unable to perform their usual activities, and they are full of complaints of every possible type. It may be in the inherently unstable that there is such a thing as a typical

primary neurasthenia, but it is not commonly found. That secondary neurasthenia exists is beyond dispute, and that the symptoms which crown the diagnosis go back a long way in the family life, the family illnesses, as well as the incidents of the life of the individual, or even his remote ancestors. Add to that unexpected strain, fatigue, and worry, and the picture is more or less complete.

We are all tempted to pass over the symptoms of the neurasthenic too lightly, and we all make hasty diagnoses, but these errors can be remedied by a critical investigation, such as every physician should employ. The early complaint of the nervous-exhaustion type is that they are weak both physically and mentally, although the physical symptoms predominate, and that they are unable to endure an excess of effort; but, in the light of the instability of their nervous apparatus, it is no wonder that they show all sorts of vascular symptoms, precordial discomfort, and over-activity of the heart, which leads to the common fear of heart disease, and which is not infrequently emphasized by the careless, although unintentional, hint of the physician that the heart is not quite right. This in itself is enough to create further instability, and it sometimes requires months, or years, of correction and persuasion to emphasize and to overcome this false impression.

In most cases of nervous exhaustion, the primary symptoms can be traced to young life. The first history is that of a weakly organized and badly developed and an improperly trained child. These children, on account of their symptoms, are considered by their families as suffering from an illness, which is true, and if neglected or allowed to go by default, the inevitable result is a lack or loss of control by the individual. The individual loses confidence, both in himself and in others, and not infrequently is followed by a lack of conception and perception, and a lack of desire either for improvement or for recovery. He starts on the trail as an invalid, and he continues in this same path for an uncertain and indefinite period. All of his functions become disorganized, and he presents the picture of a nervous system without proper surroundings, and usually without proper nourishment, and, most of all, without proper training. All of us remember the patient, if she is a woman, who is inclined to look upon her husband and family as unsympathetic, because they, disregarding her important state, cannot possibly concede her seemingly distressing illness. They grow impatient with her

complaints, and endeavor to brush them aside in a gentle way, or by classing them as an imaginary disorder. If, on the other hand, the immediate family realize that the growing individual is nervous and unstable, their attention should be directed at once to the proper training of the developing nervous system, and this sometimes requires a strong hand, a firm but sympathetic method. It is a common experience that the individual who suffers from nervous exhaustion is sometimes able to rise to an important occasion, to accomplish what was thought impossible, only to lapse again into dire exhaustion or collapse when the demand for action has subsided. These spasms of activity are not infrequent, and they are, perhaps, a part of the general picture of the individual.

Most people do not recognize the difference between an imaginary disease and a disease of the imagination. The latter is by far the more important of the two. Since the psycho-analysts have come into a prominent foreground it has been found that nervous exhaustion is commonly associated with sexual disturbances, and they are not limited to boys or girls, but include young men and young women, and women and men at the climacteric. This special class of cases have the sexual fear in the center of their continually narrowing circle. Their thoughts are upon themselves, their fears are the main topic with which they converse with themselves, and, in their efforts to rid themselves of the fear, they devise experiments, and undertake sexual activities which do not belong to them and which are harmful. It is commonly known that spinsters and widows go through the same fear from sexual forebodings. The same may apply to men. All these men and women are normally constructed and have normal desires, but they fight against the fact that they are normal and consider themselves abnormal, and they not infrequently believe themselves committing a sin for recognizing a perfectly normal function. Not infrequently women at the climacteric suddenly develop sexual activities, and they look upon them with horror and abasement. They do not realize that they are going through an evolution or devotional stage which has its seat in the nervous system. These unfortunates, together with younger people, are the feeding-ground of the quacks, who prey upon their morbid ideas, and who extort money from them until their funds are exhausted. The remedy lies with the physician, and he should discover these cases and explain their condition to the patients.

Too little importance is placed upon the cardio-renal-vascular diseases as a factor in nerve-tire, and it is remarkable how many cases of so-called neurasthenia are striking evidences of this complex group of disorders. Most of us recall the unfortunate individual who suffers from colitis, and the common history is that he complains of the expulsion of large quantities of mucus from the bowel. The time has gone by now for this to be called a "catarrh," for it is in all probability a disorder of the endocrine glands, due to a nervous instability.

"Neurasthenia" and "melancholia" are words which are carelessly interchanged. If we remember that a true melancholia is an involutional disease of middle life, due to pathological blood-vessels, that the emotional depression is usually without cause, and that early in the disorder physical weakness is not a factor, we ought not to make many errors between these two borderland conditions. Melancholia is a condition in itself, and should not be confused or improperly associated with the ordinary nervous exhaustion. The hypochondriac is not necessarily a neurasthenic. He is one who has a disease of his imagination, and he enjoys thoroughly the recitation of his supposed abnormalities. He can be cured by forcing his educational exercise, for his condition is purely a mental one.

Developmental dementia precox, or primary insanity with its dementia, with its catatonic state, its stupor, its negligism, muteism, refusal of food, and personal uncleanness, has nothing to do with neurasthenia. The borderland has already been crossed.

"Psychasthenia," a term unfortunately, at times, used synonymously with neurasthenia, should be explained rather than permitted to remain a confused element. Psychasthenia is a pure, mental, physiological tire from overwork or overstrain, carrying with it an inability to do mental work. The patient lacks the power of attention and concentration. There is not infrequently no hereditary, and even no physical, sign, but it is a condition common among the intellectual, and affects men perhaps quite as often, if not more often, than women. The onset is usually slow, occasionally very sudden. The patient finds that he is unable to fix his attention on every-day matters, that he awakens refreshed, but is tired when he gets up. He grows worse during the day and then is better in the evenings. He is unable to connect his ideas or to carry out executive thinking. There is a little time between the expression of ideas, and there may be,

and is in many cases, some mild confusion. There is really no true loss of memory (?), but the patient is unable at times to recall simple things, such as paying a bill or receiving a check. Impressions do not find lodgment in his brain, and, later, he may develop a true loss of memory. He seems unable to compel his mind to do his bidding, although his physical symptoms are lacking, they may appear after a period of weeks or months in this psychasthenic state. Most of all, he complains of vague aches and pains in the back of his neck, which is a true symptom of mental tire. He has loss of appetite. He has inertia of his will power, and he becomes depressed and fearful, particularly of becoming insane. Thus he goes around in a vicious circle with little or no relief.

The diagnosis of psychasthenia is not so difficult, and the one disease with which it is commonly mistaken is general paresis. Here the difficulties should not be great. The general paretic has some very important symptoms. He shows them in his physical findings. He has irregular pupils, and he has a history or a gross evidence of syphilis through the Wassermann and spinal content. He has disorders of speech, disorders of handwriting, and, not uncommonly, has grandiloquent delusions. Not so with the psychasthenic. He is simply laboring under mental fatigue with a mental twist, his kinks are entirely different, and his physical findings as compared with the paretic are lacking. The absence of real delusions and the presence of only a mental tire mark the psychasthenic.

Among the borderland patients are those who may be safely designated as vampires, human vampires, who range from one end of the medical field to the other, enslaving, captivating, or destroying young men, and sometimes older men, by their devices, by their suggestions, and by their dramatic impulses. The young man has seen but few of these trying cases, and he succumbs from force of argument, from complaints, and from those who attempt to involve him in their domestic difficulties. The older man, although presumably on guard, is sometimes swept from his feet by the young vampire who is able, by her wiles and witcheries, to overcome his staid and methodical habits, his morals, and his personality. One must remember that people may be intellectual, but not necessarily intelligent, and consequently there may be this class of vampires to analyze. These people are often well read, but have a singular faculty of not keeping well informed, nor are they possessed

of good judgment and reasoning powers; and, as someone has said, very often their stock in trade is equal to the "vapid vaporings of the illiterate imbecile."

Reference has been made to the "sweet baby-like vampire," seen not only in screen life, but in private life, and there is but one word of warning to be said in relation to these people—"Beware."

Another very difficult and nerve-wracking type of vampires is the selfish vampire. His selfishness amounts almost to a monomania, and is an endeavor on his part to overcome everything and everyone who stands in the way of his happiness or comfort. He protests that he is unselfish. He protests that he loves his family and the world in general, but he loves them only so far as to put himself in prominent places and to bend every incident to his own personal advantage and comfort. These people are responsible for more domestic infelicity and unhappiness than many of the actively insane, and there seems to be no remedy and no way to get out from under the clutch of the selfish vampire other than to escape and run, or for the doctor to take up another specialty, and even then this selfish vampire would acquire an illness that belongs to the newly chosen specialty.

Next in form is the ugly vampire, who rules, or attempts to rule, with a rod of iron, treading a pathway that he marks out for himself and trampling under his feet every obstacle, human or divine. These people can and do cause many heart-rending situations, and are able to upset, not only individuals, but communities, and who become very soon inordinate nuisances.

There is unfortunately very little to do for these people, as killing is still considered a crime. Their wills may be bent in some direction, but only because they are forced into a situation from which they cannot escape. They look ugly, act ugly, and they are ugly in mind and body, and yet there is no help for us other than complete annihilation.

The borderland cases of mental and nervous disorders are very interesting studies, because they require radically different forms of government. The subject of nervous exhaustion requires rest and attention. The psychasthenic commonly needs work, not mental work, but training and manual labor. The hysteric need training, but they all need discipline of some kind, and the discipline which is best suited to them should be carried on away from their old conditions, surroundings, and influences; and

this is one of the trying things with which every practitioner has to contend. Occasionally he may have the patient under his unfettered direction; more commonly, however, he is interfered with by the family, who interrupt his course of treatment or training and who become dissatisfied because immediate results are not obtained.

When one considers, too, that these borderland cases may consist of what we call, and is commonly known as, the eccentric class of people, a second type known as the pseudoparanoic forms, and a third type known as the obsessed, one can readily appreciate how difficult they are to manage, and to care for. The eccentric, like the poor, are always with us. They produce degenerates, and they cause irreparable trouble in their own homes and in the homes of others. The assumption is true that we are all more or less eccentric, that we have our little foibles, that we have our own point of view, which is not infrequently illogical, that we have a certain amount of egotism, or we are more or less shy and we attempt to cover it with brusqueness or affectation. The eccentric has no true idea as to real values. He is the one who goes from one absurd thing to another; and yet to him it is the crucial factor in his existence. He is a nuisance; and, although he may be classed as a reformer and a believer, he is just the same a national nuisance. He accomplishes less good in the community for the expenditure of energy he exhibits than the illiterate or ignorant laborer.

The paranoid is of a little different type. He has gone on a little farther over the borderline. He is not exactly a paranoiac, but comes very near it. He is the abortion of the paranoiac. He is dangerous in many ways, because we never know what he will do or what he may attempt. He has his own moral code, which no one can change, and, as Dr. Burr has very aptly described it, "This moral code contains many laws about other people's duty toward him but contains nothing about his duty to other people." He is seemingly intelligent, sometimes he is excessively brilliant, but he is mentally and morally twisted. He is over-busy from his point of view, but he accomplishes little from our point of view. This type of borderland cases may be found in all classes of men,—among the mystics and among the scientific. In political organizations there are large numbers of paranoids. They aim to be leaders, but they lead one into paths that are devious and rarely reach any destination. They may do things which are criminal in type, and they have been known to commit murder.

The courts rarely recognize this type of men as men suffering from disordered minds, and they are sent to the penitentiaries because they have committed a criminal act, when, as a matter of fact, their criminality is a symptom of their degeneracy.

The obsessed types are very common, and they often mingle with others unsuspected. They have no delusions, but they have twisted ideas, and they cannot escape from the idea which obsesses them, and they do many queer things. One patient I recall was a woman who came into my office wearing a cheap calico dress and a ten-cent straw hat. She was bright and intelligent, and laughed at her own tale of obsession. She had been washing some handkerchiefs, and, in bringing them up from the basement on a clean plate, a fly had lighted on the pile of linen and she was obsessed with the idea that she must wash them all over again. She did this many times during the day, until she found it almost impossible to drag herself up and down stairs. She knew the idea was foolish, but she was unable to repel it or to withstand its demand. Another patient I recall was obsessed with the idea of social equality, and she contrived by various ways and means when her social equals were calling on her to bring the servant into the room and introduce her. She knew that was not commonly done, she knew that it was not good form, so to speak, but yet she was impelled by her obsession to carry out the introduction. These various phobias or obsessions may be transitory or permanently fixed. There is *agoraphobia* (fear of the thought of being alone in a large open space); *claustrophobia* (fear of being shut up in a confined space); *phonophobia* (morbid dread of speaking aloud); *acrophobia* (morbid dread of being at a great height); *mysophobia* (insane dread of filth or contamination); *phophobia* (fear of being afraid). These people really suffer and dread interference with their pet phobias, and yet they not infrequently are entirely relieved of them, or at least are so benefited that they do not intrude themselves upon their relatives or friends.

Last, but not least, is the treatment of all these borderland cases, and the only way to permanently relieve them is to re-educate them physically and mentally. We have to bear with the borderland types and prevent, as far as possible, the development of their eccentricities, their phobias, and their paranoid tendencies. This can be brought about by the family physician who being wise in the performance of his duty knows

the family history; and, seeing the child brought up under bad surroundings, improper training, he sets about to correct the situation. He teaches the parent that a few fundamental principles in the development of the child are highly essential. He counsels them, first, to improve the physical development of the child by proper feeding, much sleep, and an opportunity for infant exercise. With the advanced mothers of today, he believes that the child should be permitted to grow as a young animal, in the most comfortable atmosphere and without too much interference of parents, and, certainly, without the interference of admiring relatives and friends. He next counsels them as to the mental surroundings, which include the moral atmosphere, which is really, in a way, the exercise of the developing mind. The inauguration of a line of healthy habits is of great importance, and, as soon as possible, the infant child should be trained in regular systematized methods, which means the establishment of normal functions of the bowels, for the intake of foods, and obedience to instruction. Obedience really is a most imperative method of training, and it not infrequently forms the character for the growing child into a normal or practically normal individual regardless of heredity or environment. The spoiling of the child is one of the greatest liabilities from which this world suffers, and is the cause of much anxiety, a mass of trouble, and great unpleasantness. However, granted that the physician is unable to get hold of the borderland case thoroughly, he must do the best he can with the situation during the growing period, particularly from seven to fifteen, and, later, from puberty to adolescence. Even at these epochs, it is possible to reconstruct the mental and nervous outlook of an individual who is improperly conceived, faulty in construction, and lacking in training. This means that the individual should be placed under trained workers who understand the needs of the individual, and who can correct the false impressions and the false sensations that have crept into the life of the patient. These people can be organized, systematized, and developed to a wonderful degree; but it requires long courses of training and individual influence, and the removal of fears, anxieties, and impressions, by those who are competent to deal with the mental and moral side of life. We must always remember that many of these people are more or less sick—sick because they have been brought up

adly, have been unrestricted in their occupations, and have reached their limitations.

If I had my choice in the treatment of these borderland cases, I would put the nervously exhausted in bed under proper influence, proper feeding, and under the care and direction of a skilled, intelligent nurse, until they had balanced themselves physically. This means time, investigation, and patience. If they developed obsessions or their eccentricities were increasing, I would put them in a room where they could be confined without discomfort, and let them "think it over." A great many people when brought up against discipline, organization, and systematic training, drop many of their childish methods; they recognize the authority and the help that they receive, and they actually "think it over."

They reconstruct and adjust themselves to a new and normal environment, and they learn by proper discipline how much more comfortable they can be, and how much better they are received in their walks of life. The borderland patient who is a paranoid, I would unhesitatingly isolate until he has recovered from his paranoid tendencies, or I would commit him to a state detention hospital for the safety of society and himself. People appreciate training and discipline when it is carried on in the proper way, and, if they resent or refuse to follow instructions, it is largely because the family either do not understand the situation or do not cooperate with the physician and nurse in their endeavors to correct a mental and moral or physical deformity.

COLLOID CARCINOMA*

BY M. W. ROAN, M. D.

BISMARCK, NORTH DAKOTA

While colloid, or gelatinous, carcinoma is not at all rare, yet it is seldom met with where it involves the whole abdominal viscera, as in the case which I present to you today.

The frequency with which it occurs is estimated by Gross to be 1.34 per cent of all breast carcinomas and 0.13 per cent of all abdominal carcinomas, maybe because of its cystic tumor-like appearance to the naked eye.

The first thing complained of by the patient is the distress caused by the distention of the abdomen, which is due to the presence of fluid or to pressure upon some special organ, as the bladder, the stomach, etc. However, there are many cases in which the physician is not consulted till toxic symptoms from absorption occur or until marked emaciation causes alarm in the sufferer or his friends.

Colloid carcinoma is most often found in the alimentary tract, and less often in other abdominal organs or in the generative organs.

It forms a nodular growth with a diffuse infiltration, cystic-like, as in this case here where the essential cystic character is well shown by the fact that practically all the abdominal organs are cystic or have undergone cystic degeneration, such as in the spleen, stomach, gall-

bladder, the growth even extending to the omentum and the walls of the intestines, all being matted together in one cystic mass and showing the typical cystic degeneration. The omentum and mesentery in this case are nearly all digested or destroyed, and only about one-twelfth of the mesentery is left, and this is also rapidly undergoing degenerative changes.

On section of the mass it shows in various areas the characteristic translucent gluey or jelly-like appearance, this being due to mucinous or gelatinous degeneration of epithelial cell-clusters. The carcinomatous cells have, to a great extent, disappeared, and the spaces formerly occupied by them have been filled with a homogeneous glassy substance, which under the microscope appears as structureless fibrils striking a purple color with hemotoxylin.

One-half to three per cent of all the colloid carcinomas form a degenerative rather than a distinctive type of carcinomas. The encapsulation of the epithelium is more or less complete, and the resultant is due to intracellular pressure, which produces degenerative changes in the epithelial cells. Degenerative carcinomatous cysts are very rare, being usually observed in earlier life before the age of forty, and are single. They resemble the ordinary cyst, and are usually found in the more exposed parts of the body, such as the breasts. They differ from other carcinomas in

*Read at the 31st annual meeting of the North Dakota State Medical Association, at Fargo, June 19 and 20, 1918.

being single, having a thicker wall, and in the rapidity with which they grow.

The cases observed and described by Halstead and Bloodgood have borne a very close relation to lactation, differing in this respect from simple cysts and cysts with intracystic papillomatous growths.

The cysts are the rarest variety of carcinomas of the breast, and in Halstead's cases were found to be the most malignant with metastases, spreading rapidly to other parts of the body, chiefly the axilla and neck.

When incised the tumor is composed almost entirely of gelatinous material collected into small cysts.

Microscopically.—The appearance of a microscopic section of typical colloid carcinoma is very striking. The alveoli are usually round or ovoid, and the trabeculae of the stroma are extremely thin and transparent. The alveoli appear to be over-distended with a gelatinous material, which, apparently, has been developed at the expense of the contained cells, for the latter are few in number, attached in clusters of two or three to the alveolar wall, or suspended in the material with which the alveolus is filled.

The colloid substance is either transparent or homogeneous, or is traversed by numerous fine striae. In other cases the usual characteristic carcinomatous tissue may predominate, but it will be more or less modified by colloid material, which pervades the growth. At times the stroma undergoes colloid degeneration, while the cells remain unaltered.

A cut section of such a tissue presents a striking appearance, somewhat like that of a cut section of a plum or grape.

The tissue is transparent, and has a marked gelatinous appearance, but the marked feature is the tendency to colloid change exhibited by the cells, not only the epithelial cells but those of the stroma as well.

Squamous epithelium is rare. It occurs in the cardia, and probably originates in the mucous membrane of the lower end of the esophagus, whence it invades the stomach.

The following is the history of the case I present to you today:

Male, age 51.

German-Russian, born in Russia, October, 1866, and came to this country fifteen years ago.

Family history, negative. Mother living, aged 70, well, except a little rheumatism.

Father living, well, aged 74.

Had a half sister, who died from puerperal sepsis.

Personal history: Does not remember of any seri-

ous illness; had the usual sicknesses of childhood; did not have scarlet fever or diphtheria. Grew up on a farm, and has always worked hard, doing manual labor.

Feels well, eats and sleeps well, bowels regular.

Venereal history excluded, negative Wassermann.

Present history: Came to the hospital February 10, 1918, complaining of fullness in the abdomen and a pain of a dragging character. Fullness in bladder to such an extent that urination was not satisfactory; did not think that he completely emptied his bladder. He now wants the fullness of his abdomen removed, and says that he is not sick, but that this fullness bothers him, and he wants it removed.

Examination shows a fairly well nourished man of 50 years of age, muscular.

Head and chest, negative.

Abdomen distended, seems bloated, no marked tenderness except upon deep pressure over the bladder. This causes eructations of gas. Unable to palpate any of the special organs (kidneys, spleen, etc.).

Reflexes normal, able to get fluid ballottement with the usual hand signs.

Temperature, 99°; pulse, 82, and regular.

Laboratory analysis: urine, negative; gastric analysis: free HCl, 20 per cent; comb, 20 per cent; total, 40 per cent.

Bile, a trace.

Blood, negative.

Blood, white count, 11,000.

Differential blood count: polymorphonuclears, 59 per cent; L. M., 30 per cent; S. M., 10 per cent; E. Os, 1 per cent; hemoglobin, 75 per cent.

Exploratory operation February 14, 1918, under ether anesthesia. Abdomen opened.

Upon opening the abdomen we found the abdominal cavity about one-fourth filled with a thick, stringy, yellowish fluid. On examination of the abdominal contents we found them one cystic mass.

A piece of omentum was removed for examination, with a diagnosis of colloid cancer and cystic degeneration. Abdomen closed, and treatment continued,—alaratives, potassium iodide, and arsenic, with x-ray exposures.

Results: Patient feels better, and the fullness is gone, but very little general improvement is as yet noticed. He has been tapped twice since, when fluid was less each time.

Prognosis, guarded.

DISCUSSION

DR. M. MACGREGOR: Dr. Roan's patient was unfortunate when he developed a carcinoma, and he was likewise unfortunate when the patient did develop it in the abdominal cavity, and that he did not develop it in some location that would lead to early symptoms that would have led to early diagnosis or early operation. Practically the only carcinomas of the abdominal cavity that are cured are those that cause obstruction early in their development. There are no other symptoms or signs by which an early diagnosis can be made, and very few of the patients come to a surgeon until all hope of cure is gone. In a case of this kind where one of the least malignant of the carcinomas developed there would be good hope of a permanent cure if obstruction symptoms had developed earlier. As it is, with the carcinoma so widespread there would be hardly any room for or hope of a permanent cure.

DR. BRATRUD: Of these cases cases of colloid carcinoma we have had several during the past five or six years, and we were unable to make a pre-operative diagnosis in any case, and in every case we thought of two things, either malignant or tuberculous peritonitis. The last case we had was operated on, and there were seven or eight quarts of fluid and colloid cysts. These colloid cysts were removed, and after they began to reform we put the patient under the Coolidge tube treatment, and he is still living today and feeling quite well.

There are two others cases that I can recall. One, a woman, was operated on five years ago. She is still living. In that case it was in the pelvis almost entirely, and a large mass was scooped out. The other woman was from a cancer family, there being six or seven cases in the family. She did not live over five or six months after being operated on, and at the present time we are watching her daughter for a mass in the left cul-de-sac. In most of these cases the pa-

tients complain of distention of the abdomen and of obstructions.

DR. ROAN: There are just two things I did not think of at the time which I might add now. One is, it is pretty hard to tell in case of colloid carcinoma, whether the cystic degeneration was primary or secondary. Another thing was that the abdomen was absolutely free from adhesions anywhere, there being no adhesions whatsoever. And there apparently did not seem to be any shock after the work was done, and if you would speak to the patient and ask him questions (he speaks German only) he seems to feel a whole lot better, seems to be getting along finely. He has gained in weight, and there seems to be a general improvement.

I have seen one other case of colloid carcinoma, but it was of the breast. In this particular case both breasts of the woman were one cystic mass. A person would think of a tuberculous condition, an abnormal mass of cystic cells.

TO WHAT END IS BIRTH-CONTROL LEADING US?

By FRED ELMER LEAVITT, M. D.

ST. PAUL

The conditions of war more than ever force us to consider the changes taking place in the internal structure of our population. The fact that the birth-rate is declining is of the greatest possible moment to us as a nation. Allowed to go on unheeded we shall find ourselves, sooner or later, in a position of numerical weakness.

For the most part the conditions have escaped our attention. We have felt at ease, knowing, in a general way, that our country is growing and is prosperous. The fact that in other countries, notably France, the birth-rate has been declining for years has passed unheeded by us. That country's experiment in the matter of birth-control has been before the world for a number of years, but only now are we permitted to view the end-result in its loss of man power. Even before the present war the birth-rate there was lower than the death-rate, and for ten years the declining birth-rate has filled her best minds with apprehension.

The following facts are gleaned from a most convincing paper prepared by the eminent statistician, Mr. Louis I. Dublin, and read before the American Association for Advancement of Science. The address was made last December, and, upon the request of Hon. E. Y. Webb, of North Carolina, was printed in the *Congressional Record*. Since then reprints have been struck off, and mailed to physicians throughout the country.

Going back to the beginning of the nineteenth

century, France stood in the foreground with a population of 29,000,000. The states composing the German Empire numbered about 23,000,000, and came next. The United Kingdom stood third, with a population of about 18,000,000. One hundred years later finds the German Empire in first place, with a population of 65,000,000; the United Kingdom in second place with a population of 45,000,000; and France in third place, with a population of only 39,000,000. Up to the year 1860, France was still in the lead, having at that time a population of 37,000,000. It is significant that during the next forty years France gained only 2,000,000, while Germany almost doubled her population.

Taking another view of the situation than that of gross totals, we find the strength of a nation represented by the number of its population under certain ages. For example, one-half of Germany's population is under 23.5 years of age. In England and Wales one-half of the population is below 26 years; and in France one-half is below 30. This decline in the youth of a nation is invariably due to a decreasing birth-rate. Furthermore, it is to be observed that with a low rate of reproduction there is also an evidence of indifference as regards those that are born. One condition seems to be the outgrowth of the other. At least there has been lacking in France that high standard of health-conservation so highly developed in England.

A declining birth-rate by no means is limited to

the French nation. The experience of England has been fully as disturbing. Comparing the period 1871-1875 with the period 1911-1914, the former showed a birth-rate of 35.5 per 1,000 population, the latter of 24 per 1,000. Our own increase, taking the United States as a whole, is satisfactory. The difficulty with us has been that we have remained content with aggregates: We have been satisfied with our increase without taking thought as to what keeps it up. We did not realize that our augmented population was due to immigration and a high rate of increase among our foreign-born, and not to the multiplication of our native whites. In 1870 this group of native whites constituted 67.8 per cent of the total white population. In 1910 it had dropped to 60.5 per cent. In certain areas the decrease has been even more marked. For example, in the New England states the proportion of native whites fell from 52.3 per cent in 1890 to 40.3 per cent in 1910. In the Middle Atlantic states during the same period the drop was nearly as great.

The study of birth statistics is particularly disquieting when we come to inquire into the fecundity of our college graduates. Take those of Yale and Harvard as representatives. Phillips has shown that the married alumni of these schools rear families of about two children each. And as for the graduates of women's colleges, the number of children per married woman is even less. Besides, more than 50 per cent of such graduates never marry at all. In short, those who by economic and social standards are best able to rear families are not rearing them, while, on the other hand, another group, less able, if we apply the same standards, are producing on the average more children than are required to maintain our present population.

What is the result?

"The best blood of America," quoting Dublin, "is being constantly thinned out by the conscious limitation of birth, and is being replaced by a stock of different order. Our national standards are being leveled to meet more and more the lower quality of our population."

THE JOURNAL-LANCET

Represents the Medical Profession of

Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the

North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.

H. J. ROWE, M. D. - - - Casselton, N. D.

H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

OCTOBER 1, 1918

THE INFLUENZA ALARM

If we believe the reports in the public press, it is quite evident from their point of view that there is a new type of influenza, said to have originated in Spain and been brought to America in U-boats. It happens, however, that the Assistant Secretary of War, Mr. Roosevelt, came over in a transport, and, as a result of his influenza, has pneumonia. It is further evident from newspaper accounts that there is a good deal of uneasiness in the eastern cities, because so many cases of pneumonia have been the outgrowth of an attack of influenza. Although so far no cases have been reported in Minnesota, there has been a tendency to colds and minor infections of some sort accompanied by a rise of temperature, coryza, aching muscles and joints, and a good deal of physical depression, all of which leads one to think that even now there is an infective microbe coursing through the air.

But the pneumonia scare is really the thing that alarms the people. It is well known that the pneumococcus is no respecter of persons, whether they be thin and weak or stout and robust; in fact the latter type are more subject to bacterial invasion than are the former. The colds that we have had during the summer and early fall have been different in some ways from the ordinary grip attacks. This form of virus seems to be more active, and does not respond very promptly to treatment. The old-time remedies, such as many people buy at the drug-store, and the favor-

ite remedies of many doctors, do not seem to touch the right spot; therefore it seems that these disorders may run, and do run, a specific course, and they are more or less severely limited. Yet a few instances have been recorded where the progress of the disease has been augmented periodically, and may last for a number of weeks and sometimes a number of months, showing a re-infection from time to time.

Everyone seems to be agreed upon the best method of treatment, namely, rest in bed under quiet conditions, administration of a moderately mild laxative, and ingestion of light foods,—semisolid and liquid foods. If the patient remains in bed a few days, the physical exhaustion disappears, and recovery is very prompt.

It seems rather unfortunate that this so-called "Spanish epidemic" has been widely heralded in the press. Even though some type of the epidemic has swept the European armies and may invade this country, there is no serious cause for alarm. Physicians would do well to instruct their patients to keep themselves in good condition, to observe regular habits, and not to come into close contact with those who have colds.

Many attempts have been made to educate people as to ordinary, sensible precautions about the transmissions of communicable diseases, but a great many of them pay no attention to the instructions. They continue to breathe and cough in one another's faces as if they had exclusive possession of the entire atmosphere, yet, if they knew how easily these colds were transmitted from one person to another, they would be very careful about their personal indecencies.

THE DRUG HABIT

Something seems to have gone wrong with the enforcement of the Harrison antinarcotic law; at least, one would gather that there is now less attempt to carry out the law, and it is said that the habitual use of morphine, cocaine, heroin, and other narcotic drugs, has increased rapidly in the United States within the last two years. It is estimated there are 1,500,000 addicts in the United States, of whom Minnesota has 1,249. These figures are probably under-estimates as to the number of addicts, both in this state and in the United States. Unfortunately, there are many drug addicts who have drifted into the army, and it is said now that men acquire the habit in order to secure their dismissal from the army after they have been drafted. Such a practice, of course, calls for very drastic measures, and it also creates a condition which is deplorable. It

is commonly known that users of narcotics are the worst possible cases to deal with even in camp life, probably for the reason that the officers and soldiers who are addicts are granted certain days of absence from camp, a day or a day and a half each week, during which time they replenish their stock, or, at least, secure enough to tide them over until the next vacation or week-end period. This sort of thing, too, has developed a large class of peddlers in camps and in cities, and their methods of selling are sometimes very ingenious.

Physicians ordinarily find it a difficult problem to get sufficient narcotic drugs for necessary cases, but there seems to be less trouble among the lay people whose needs are supplied. As always, there are peddlers somewhere, or a group of runners, who are ready to spread the information to aid their fellow conspirators, whether venders or users. It is expected that Congress will take up this matter this winter. Perhaps we are disparaging the situation, but it looks like a large undertaking. In spite of the fact that preparations and patent medicines that contain narcotic drugs have been reduced in number by the Council on Pharmacy of the A. M. A., there are enough sold to supply the moderate addict with some relief. Then, too, it is rather remarkable that these people should use drugs habitually to ease their state of mind, for they try to be secretive, but, as a matter of fact, they are easily detected. They are recognized by professional and lay observers, but they soon get hardened to observation and criticism and advice, and the result is—nothing.

Drug addicts are not much good, anywhere at anytime. They create all sorts of disorders and unrest, and lead others into temptation. It was thought at one time that the United States Government would establish hospitals in various states exclusively for the treatment of the addict, but this seems rather a round-about way of solving the problem. It would be much better to cut off the source of supply, to make the handling of it so precarious and the punishment so severe that venders will seek other routes of speculation. Yet, when we analyze the situation fully, we see how futile this would be, for, if anyone wants a narcotic or a drink, he is going to get either what he wants or a substitute. This condition is likely to continue for a few years before the situation can be said to be well in hand.

In the meantime doctors have done more to

prevent people from forming bad habits than have any other class of people. True, there are some doctors who pose as responsible and regular physicians, and yet have gone into the business for speculative purposes. In Hennepin County five or six men have been indicted; but only one man has been convicted. Two others were acquitted at trial, and the rest are waiting to be tried. It is very easy for a doctor to disclaim the sale of drugs merely for profit. His ready excuse is that he is simply treating an old addict. If the doctors in the county societies would put their fear and timidity in their pockets, and take the stand of urging the suspension of all members who are known to sell narcotic drugs for profit, the probabilities are that the situation would be much clearer, and they would aid the Government in stamping out the drug habit.

A MARVELLOUS DISEASE DEATH-RATE

The annual death-rate from disease of men of military age in civil life in the United States is 6.7 per 1,000. In the Mexican War this rate was 100; in the Civil War it was 40 in the year 1862 and 60 in 1863; in the Spanish-American War it was 25.

In the Russo-Japanese War the disease death-rate reached the lowest recorded in history of war, namely, 20 per 1,000.

For the week ending July 26, this rate in all the American forces, at home and abroad, was 1.9 (less than 2) per 1,000; and for the two months, from June 15 to August 15, it was 2.8, which is only 14 per cent, or $\frac{1}{7}$, of the lowest rate recorded, that is, the rate in the Russo-Japanese War.

If the nations engaged in the present war will apply in civil life the health lessons learned in the present World War, the numerical losses of such war will soon be made good; and, moreover, the real "superman" may be seen abroad in the earth.

SPECIAL ATTENTION

Under the head of "Miscellany" we are publishing much important matter sent us by the various departments of the Government, the Red Cross, and other organizations engaged in the World War. All of these items are interesting, and some are solicitations for the co-operation of physicians.

BOOK NOTICES

THE MEDICAL CLINICS OF NORTH AMERICA. Volume 1, Number 6. (The Southern Number, May, 1918). Octavo of 224 pages, 35 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published Bimonthly. Price per year: paper, \$10.00; cloth, \$14.00.

The present number is a collection of very interesting clinics by Southern teachers. While some of the reports bear evidence of being prepared for publication, rather than being strict reports of clinics, all are concise, well arranged, and in good form. The number opens with a clinic by Dr. McElroy of Memphis on the "Nephropathies," following the classification of Volhard and Fahr of kidney affections. Illustrative cases of nephrosis and nephritis, with and without hypertension, and good clinical discussion of these difficult problems in classification, lend interest to the article. Dr. McElroy attempts a valuation of the estimation of insufficiency, in the amount of cardiac hypertrophy of the urine concentration, as well as the usual urine findings.

Anything written by Dr. Charles L. Minor on the subject of tuberculosis demands respectful attention. In the present number he contributes a very practical discussion of its value, and the proper selection of cases for this procedure. Malaria is the subject of two very good articles, one by Bass, of New Orleans, giving three types of cases of malaria with his practical experience in treatment of quinine; and another by Daederick, of Hot Springs, Arkansas.

Fontaine, of Memphis, has a discussion of achondroplasia, a most interesting condition, with the *x*-rays, showing the deformities of the skeleton. Cases of tuberculous peritonitis and the fever of syphilis are also described.

Major McLester of the United States Army contributes an article on measures to prevent dissemination of disease.

Pellagra, with a study of ten cases in two families, is the subject treated by Dr. Snyder, of Birmingham, Alabama—a most useful contribution to the literature of this disease. Reflex gastrospasm, gonococcemia, myocardial infarct following coronary sclerosis, and Hodgkin's disease, are interestingly described by Dr. Gibbes, Dr. Wilson, of Charleston, South Carolina, and Dr. Baullin, of Atlanta.

The volume closes with a clinic by Dr. John C. Munroe, of Charlotte, North Carolina, on severe headaches. An index to volume one is appended.

Altogether the publishers are to be congratulated on having consistently carried through the first volume of the "Medical Clinic of North America."

—CROSS.

CLINICAL DIAGNOSIS. A Manual of Laboratory Methods. By James Campbell Todd, M. D., Professor of Pathology, University of Colorado. Fourth edition, revised and reset. 12 mo. of 687 pages with 232 text-illustrations and 12 colored plates. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$3.00 net.

This concise and practical book has been revised in

its fourth edition, so that it covers the newer laboratory methods of diagnosis. The introduction gives brief, but very helpful, instruction in the general use of the microscope and the examination of fresh unstained material. The study of the sputum is taken up in detail, including preparation of material, staining methods, chemical tests, and bacteriological study. This chapter has some unusually fine illustrations—some of them colored. The chapter on the examination of urine takes up the newer chemistry giving in full detail the methods for determining nitrogen partition by colorimetric methods. Different colorimeters and their uses are fully described, also the preparation of the standard solutions for color comparison. The preparation of all reagents and the determination of results are given with necessary exactness.

The quantitative estimation of sugar and chlorides is discussed, and a simple and practical method for the detection of lead in urine is described.

Renal function tests and the usual methods of chemical and microscopic study of the urine are clearly and concisely discussed. Many good illustrations add to the value of this chapter also.

The study of the blood presents the methods for determining coagulation time, and for detecting and diagnosing parasites.

The chemistry of the blood is not discussed, which detracts considerably from the value of a book otherwise completely up to date.

The ordinary methods of blood-examination, including preparation and staining of smears and cell-counting, are well described.

The chapter on animal parasites is well illustrated, but little is said about tropical infections.

The book closes with a general consideration of serological and bacteriological methods, including the Wassermann test and other complement-fixation tests.

The preparation of vaccines is discussed, and the preparation of, indications for, and application of tuberculins is dealt with very thoroughly.

Altogether this book is a helpful and practical addition to any laboratory library.

—BARNARD.

DISEASES OF THE MALE URETHRA. By Irvin S. Koll, M. D., Professor of Genito-Urinary Diseases, Post-Graduate Medical School and Hospital, Chicago. Octavo of 151 pages, with 123 illustrations, several in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$3.00 net.

This is a concise description of the author's own methods of handling gonorrhea and its complications, with chapters devoted to impotency and sterility.

Since there is no one recognized method of treating urethritis any method which is consistent with its well-known pathology may be of merit.

Doctor Koll uses albargin as the protein-silver salt of choice. He uses it in stronger strength than is the rule. He advises constant microscopic check, and uses massage over a sound as an irritation test.

In the treatment of stricture he uses sounds, and advises meatotomy, in order to admit large sizes. He condemns dilators.

There are some very good colored drawings of endoscopic findings, but the descriptive text relative to these illustrations is very brief.

Doctor Koll takes a decided and very radical view

on the length of time which should be imperative between a cured gonorrhea and marriage.

The physical treatment by the use of the endoscope in impotency and sterility is described.

On the whole, the book is a satisfactory short treatise on a very difficult subject.

—MICHELSON.

THE SURGICAL CLINICS OF CHICAGO, Volume II, Number 3 (June, 1918). Octavo of 253 pages, 62 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published Bimonthly: Price per year: paper, \$10.00; cloth, \$14.00.

This volume, like the others, which is a continuation of the late John B. Murphy's Surgical Clinics, is of indisputable value to readers of surgical literature. At the head of each essay is a brief abstract of its contents, thereby facilitating a choice of articles.

The present number contains a very interesting and educating series of cases from the clinic of Dr. Frank Smithies at Augustana Hospital, formerly of the Mayo Clinic. The other contributors are Drs. Carl Beck, Fred A. Besley, Arthur Dean Bevan, Coleman G. Buford, Fred G. Dyas, Daniel N. Eisendrath, J. S. Eisenstaedt, Gustav Kolischer, Albert J. Ochsner, Edward H. Ochsner, Nelson Mortimer Percy, Edwin Warner Byerson, Geo. E. Shabaugh, Roger T. Vaughan, and Thomas J. Watkins.

—LAURENT.

MISCELLANY

A GLIMPSE OF THE WORK OF OUR BRAVE NURSES ABROAD

So large a quota of Northwest physicians and nurses have gone overseas that more than a passing interest is felt in the Northwest in the fourteen nurses' huts which the Young Women's Christian Association has built as a part of its war work. The huts, which are places of rest for nurses, are located near the base hospitals and are used as recreational, as well as rest, centers. Recent reports since America has been in the thick of the fight have come from the Young Women's Christian Association workers over there, telling of the work being done by these two groups of young American women, who are working together for the winning of the war. From one of the secretaries in a base hospital comes this bit of a paragraph in a larger report which has a bearing upon our own conservation of sugar:

"I used to think the weariness of the life of the nurses was exaggerated. Now I know that half has never been told, and when you see that, combined with an extraordinary forgetfulness of self, expressed in a hundred ways, you stand still before it. I have seen girls carry their desserts from the table for some wounded boys, or tramp the dusty road into town after a day of hard work to buy some fresh food for a feverish lad, or make a batch of fudge for a ward of boys who have gotten well enough to crave it. When you save sugar in America I do not mind your knowing that some of it is used in that way, and I am sure you would not, if you could see the gleeful faces that welcome it, or hear the shouts of joy that go up."

From Miss Willie R. Young, who is at Base Hospital No. 15, there comes this incident:

"Dr. Harry E. Fosdick, one of the many speakers of prominence who dropped in one nurses' hut to give cheery talks, was giving an address at Base Hospital No. 15. In the crowd was a boy of sixteen with both feet shot off. He was wheeled in to hear Dr. Fosdick, and listened with shining eyes to the talk on the meaning of the present crisis.

"When Dr. Fosdick had finished the boy looked down at his stumps and then at Dr. Fosdick, and burst out with 'Gee, I am glad it was that part of me and not the top that got busted up.' Dr. Fosdick looked down at the pale face with the big eyes, and said: 'You bet, for the man is all there.'

"These are the boys with legs and arms gone, with gas burns, which threaten the eyesight, but with just that kind of spirit that the nurses are caring for, and only those who live with the girls can know the strain on heart and body.

"Since the last drive the Nurses' Club of Base No. 15 has had no dances, parties or activities of any importance. The hut has just been a place of refuge and a home for 130 hard worked and strained nurses when they had a few minutes off duty. Occasionally a big spirit from the outside has come in to take us outside of our Compound wall. The Countess Goblet D'Aveilla, of Belgium, who, by the way, is going to America in the fall, had tea with us, and talked to the Club about her experiences in Brussels under the German occupation. Bishop Brent, Judge Evans, Miss Winnifred Holt, Dr. Fosdick, each is giving more than he will ever know.

"The Hut is being used constantly, beginning as early as 6:30 A. M. on Sunday morning for Holy Communion, until 10:30 at night when I have to tell the various couples a motherly 'Good night.' During the last month a new unit of 40 nurses from Philadelphia arrived, not having seen their baggage in six weeks, and with no prospect of doing so. The Hut kitchen was in a constant state of overflow while girls pressed their one uniform. The machine whirled from morning till night as one girl replaced another to make collars and cuffs for that same one uniform. The tea-kettle boiled from 3:15 until 5:00 P. M. as one after another stole in for 'just a minute away' from the wards. The 'quiet room' has been an oasis, and our few precious books have been worn slick.

"On July 2d the Roosevelt Unit won their second service stripe, and we are now busy planning a kind of anniversary that will stimulate spirit for the second mile. Romance and excitement have become daily routine with them, and this second year of the war will be a test year indeed."

MOBILIZATION OF WOMEN PHYSICIANS FOR ANESTHETIC SERVICE

Every effort is being made to keep war surgery at top-notch efficiency and to provide every wounded American doughboy with safe, rapid and comfortable anesthesia both at the Front and in the Hospitals in Blighty.

In this connection the following telegram is self-explanatory:

(Copy)

Washington, D. C., Sept. 18.

Dr. F. H. McMechan,
Avon Lake, Ohio.

Proceed at once to secure qualified women physician anesthetists under 45 years of age, of mental poise, as well as young women graduates, who are competent for such service.

(Signed) DR. FRANKLIN MARTIN (per)
Dr. Emma Wheat Gillmore,
Chairman, Women Physicians' Committee
Council National Defense, Medical Section.

Those women physicians who are qualified for anesthetic service or who are competent to be intensively trained are requested, at once, to get in touch with

Dr. F. H. McMechan, Sec'y,
Interstate Anesthetists,
American Anesthetists,
Avon Lake, Ohio.

A HANDSOME TRIBUTE TO MEDICAL MEN

The News-Tribune of Duluth is one of the best edited newspapers in the West, and because of its high standing the following tribute to medical men, elicited by the recent meeting of the Minnesota State Medical Association in that city, will be much appreciated by medical men:

"No profession, no vocation, no class has risen to and met the demands of the war more fully nor indeed quite so fully, as has the profession of medicine. The demands upon it were greater and the response has added a new dignity as it has a new glory to the men who have so loyally forgotten self in the needs of their fellowmen.

"Nowhere else has the close connection between brains and duty a finer illustration. Doctors are seldom rich, which, too, is to their credit. But they must have brains and these must be trained. Their daily tasks also bring them in close touch with the miseries, the heartaches, the sorrows and misfortunes of all the people of all classes.

"They cannot yield in full measure to this side of life or they would be weakened almost to uselessness in their work of alleviation. But it does bring them breadth of understanding and a fullness of knowledge which broadens their vision and creates the liason between brain and duty, between ability and responsibility.

"They have splendidly responded to this at this time of their country's greatest demand. They have put self to one side and have considered only their professional opportunity to give for the good of others and of their patriotism carried to internationalism country. It is as fine an example of as this old earth has known. Moreover, the doctor knows no enemy. He ministers alike to friends or foes. He does not kill; he alone saves."

AN UNPRECEDENTED OPPORTUNITY FOR WOMEN

By EMMA WHEAT GILLMORE, M. D.

Chairman Committee of Women Physicians
General Medical Board, Council of National Defense

The same year that gold was discovered in California, a lone pioneer received the first medical diploma which the United States had issued to a woman. Other colleges shortly followed the example of the one which

had opened its doors to Elizabeth Blackwell, and today over fifty co-educational medical schools admit women upon the same terms as men.

There are more than 25,000 American physicians in military service at this writing, and the Council of National Defense is undertaking, through the Volunteer Medical Service Corps, an organization which has President Wilson's approval, the task of classifying the qualifications of ninety thousand more. Of these, about six thousand are women, less than one-third of whom have registered with the General Medical Board.

Women of the profession, unless our qualifications are standardized and on file, can you not see that we are an unknown quality and quantity as far as the Government is concerned? In spite of the overwhelming difference in number, 6,000 women and over 100,000 men, and regardless of the fact that over twenty-two centuries have passed since Hippocrates wrote the immortal Oath, and only sixty-nine years have elapsed since women entered the medical profession, the Volunteer Medical Service Corps has invited them to membership with the same impartial cordiality as it has the men.

During the last week in August application blanks for the Volunteer Medical Service Corps were mailed in franked envelopes to all legally qualified men and women in the United States who were not already in Government Service. Presumably a number of women have been overlooked because many of them are not members of medical societies, but this will speedily be corrected if a notification of the omission is sent to the Volunteer Medical Service Corps, Council of National Defense, Washington, D. C.

Meanwhile, medical women who possess a vision will see in the Volunteer Medical Service Corps an incomparable method of organization which will register their qualifications and place them in an identical coded class system with men physicians. This Corps is in reality an ideal procedure for mobilizing the military forces of our country for selective medical war service. Incidentally it will place loyal and patriotic medical women by the side of those men who are willing to give themselves. Even though all of them are not elected to membership, their names will be on file with the Government as willing to serve as far as their strength and capability will permit, and no one can point a finger at them and say "slacker."

Will a page be turned over in the history of American Medical Women upon which will be written the qualifications of 6,000 of them, matching that group of English physicians known as the Scottish Women's Hospitals, which was so perfectly organized that they were able to hand over to their Government a constructively organized body of professional women for military service? Or shall we continue, as we have done in sporadic groups for the past 69 years, to demand recognition of men and at the same time neglect to unaniously affiliate with them in recognized medical societies, and to withhold our influence both with pen and vote when medico-social and medico-political and medico-scientific issues are at stake which shake the very foundation upon which medicine rests?

The body politic of the civilized world holds a prominent place for the profession of medicine in the near future. Are we to have a hand in shaping it? The Volunteer Medical Service Corps is big with promise for women of the medical profession if we take advantage of it to put ourselves on record. The response

which the Council of National Defense receives from women who apply for membership will tell the tale as to whether they have or have not grasped and taken advantage of the unprecedented opportunity which this world's war for Democracy has opened up for them through the medium of the Volunteer Medical Service Corps.

STENOGRAPHERS AND TYPISTS WANTED BY THE GOVERNMENT AT WASHINGTON

The Commission again requests the assistance of editors of periodical publications in the campaign to recruit a sufficient number of stenographers and typists to meet the great demand of the Government offices in Washington, D. C. The need for such workers grows more acute daily. Owing to the general demand, the Commission is having difficulty in meeting the requirements of the Government, and it is requested that you assist in the effort by inserting in your publication, free of charge, a notice which shall include all or a suitable part of the announcement contained in the inclosed poster. The Commission will be pleased to have a copy of any issue which contains the announcement.

In the matter of housing in Washington, it may be said that the Room Registration Office of the District Council of Defense, at 1321 New York Ave., has on its list more than 4,000 rooms which have been carefully inspected and are available for new appointees. The usual charge for rooming accommodations with board, that is, the two principal meals of the day, is \$40.00 a month, but in order to obtain this rate two persons must ordinarily occupy one room. In addition, the Government will soon erect residence halls, including cafeterias, for the accommodation of Government employees in Washington.

The Commission will appreciate your further co-operation in its endeavor to recruit the civil service to meet war needs. It is perhaps unnecessary to say that an efficient civil service is as important as the armed forces in the prosecution of the war.

By direction of the Commission:

Very respectfully,

JOHN A. McHENRY, President.

NEWS ITEMS

Dr. E. O. Vollum, of Bode, Iowa, has moved to Albert Lea.

Dr. C. F. McComb has moved from Duluth to Banbury, Wis.

Dr. C. V. Lynde has moved from Parkers Prairie to Waubun.

Dr. J. G. Chichester has moved from Redfield, S. D., to Oshkosh, Wis.

Hibbing is to have a detention hospital for the treatment of patients with venereal diseases.

St. Cloud has raised a new unit of five nurses for army work, and the unit now awaits a call.

The Columbia Hospital, of Butte, Mont., is to erect a new building to meet its pressing needs.

The recent epidemic disease among children in Grand Forks, N. D., has been diagnosed as ileocolitis.

On September 1 St. Paul had 127 cases of contagious disease under quarantine as against 431 a year ago.

Minneapolis citizens are discussing a plan to place all the city's public health activities under one board of seven members.

It is announced from the Surgeon General's office at Washington that 9,000 more nurses will be needed before the end of 1918.

Dr. and Mrs. W. R. Reynolds, of Chatfield, have given five sons to the service. Of these sons one is a physician, one a dentist, and one a druggist.

The baby, tuberculosis, and venereal disease clinics being held in all parts of Minnesota, and to some extent in other states, are producing wonderful beneficent results.

The county attorney of Ramsey county has given county school superintendent his opinion that visiting nurses for rural schools may be employed by school boards.

An evening class in public health began last night at the University of Minnesota, conducted by Dr. H. W. Hill, executive officer of the Minnesota Public Health Association.

The physicians and dentists of Dodge County have formed a protective association to shorten the time given on credits and to protect the members from patients who will not pay their bills.

The fourteen school nurses of St. Paul made 95,787 examinations of pupils in the City schools last year. Over 17,000 parents were notified that their children needed medical or surgical attention.

Dr. R. J. Sewall, formerly of Crosby, is temporarily caring for the practice of Dr. C. L. Olson, of Pine Island. Dr. Sewall soon returns to France, where he has been for the past two years.

A home for the nurses and employes of the Sand Beach Sanatorium, at Lake Park, is to be built some distance from the sanatorium building, that its occupants may have a change of environment when off duty.

The press statements that Major A. T. Mann, of Minneapolis, is in charge of the *medical* service of the Base Hospital at Camp Dodge, Iowa, is a mistake. Major Mann is in charge of the surgical service of that hospital which has 2,000 beds.

The sale of Red Cross seals in the usual manner will not be undertaken this year, but this will not affect the work of the National Tuberculosis Association, for the War Council has appropriated \$2,500,000 for the work of the Association.

Naval Station Hospital No. 13, in charge of Lieutenant Commander W. B. Roberts, of Minneapolis, has positions for several more nurses. Only registered graduate nurses, at least twenty-five years of age and in excellent health, are eligible.

Dr. A. G. Kessler, superintendent of the Otter Tail County Tuberculosis Sanatorium, is to leave soon for Italy with a Red Cross unit of thirty-five persons. Dr. Kessler will have charge of the tuberculosis work, and will have eighteen nurses to assist him.

Minneapolis had, in common with many other cities, a smaller number of deaths in the first eight months of 1918 than in any other like period in the past. The medical profession deserves a large share of the credit for this saving of human life.

Dr. William McBride Safley, of Livingston, Montana, died last month at the age of 60. Dr. Safley was a graduate of the Iowa Medical School, and practiced in that state until he went to Bozeman, Montana, in 1892, where he practiced until his retirement a few years ago.

The University of Minnesota has appointed Dr. John Sundwall health commissioner. Dr. Sundwall comes from the University of Kansas. The students will be charged a fee of \$3 a semester to meet the expenses of the commissioner, and may consult him upon health matters as freely as they desire.

The following are the members of the Executive Committee for Minnesota of the Volunteer Medical Service Corps: Dr. J. Warren Little, Minneapolis; Drs. Thomas McDavitt, E. L. Mann, A. J. Gillette, and H. M. Bracken, St. Paul; Dr. H. M. Workman, Tracy; and Dr. W. H. Magie, Duluth.

The membership of the North Dakota Executive Committee of the Volunteer Medical Service Corps is as follows: Dr. F. R. Smyth (chairman), Bismarck; Dr. C. J. McGurran (secretary), Devils Lake; Dr. G. M. Williamson, Grand Forks; Dr. Paul Sorkness, Fargo; and Dr. H. J. Rowe, Casselton. Each county in the state will have a representative.

Leading members of the Brown-Redwood County Medical Society seem very loath to comply with the order of the State Medical Association to try Dr. L. A. Fritsche, former mayor of New Ulm, for disloyalty to the Government. Unless the Society acts within 90 days from the date of the State Association meeting, it will be automatically dropped from the Association.

Dr. Zina Goodell Harrington, of Mankato, died last month at the age of 88. Dr. Harrington was a native of Massachusetts, and was a graduate of the Albany (N. Y.) Medical School. He studied in the European hospitals, and came to Minnesota, locating at Mankato, in 1871. He took a prominent part in the medical, business, and social affairs of Southern Minnesota in those days. He was a highly esteemed physician and citizen.

Dr. Charles Henry Norred, of Minneapolis, died last month at the age of 76. Dr. Norred was one of the old-time practitioners whose number is fast approaching the zero mark. He was born in Virginia, graduated from Jefferson Medical College of Pennsylvania, and practiced in Illinois until he came to Minnesota in the 80's. He held many positions of honor in Minnesota, and was highly esteemed by the profession of Minneapolis.

Boston University announces that its medical department has been thoroughly reorganized and henceforth will be non-sectarian in scope and character. Eminent physicians of the "regular" school will conduct courses in pharmacology and therapeutics, and clinical teaching will be given in the Boston City Hospital and the Robert Bent Brigham Hospital. Homeopathic materia medica will be taught as heretofore, with clinical teaching in the Massachusetts Homeopathic Hospital and allied institutions. The spirit of the times is to do away with sectarianism in things scientific. In accord with this spirit, this school in 1918 announces that its curriculum has been made as broad and inclusive as is consistent with the medical science of the day.

RECENT ASSIGNMENTS AND TRANSFERS OF NORTHWESTERN MEDICAL OFFICERS

Assignments

Minnesota—

To Camp Grant, Ill.: Capt. E. Boeckmann, St. Paul.
To Camp Oglethorpe, Ga.: Capt. A. E. Booth, Minneapolis; Lieut. F. A. Olson, Minneapolis; Lieut. Thomas Ziskin, Minneapolis; Capt. A. E. Comstock, St. Paul; Lieut. C. F. McNevin, St. Paul; Lieut. L. A. Nelson, St. Paul.

To Fort Riley, Kas.: Lieut. F. S. McKinney, Minne-

apolis; Capt. E. Jamieson, Walnut Grove; Lieut. A. R. Anderson, Barnum.

To Camp Custer, Mich.: Lieut. C. F. Holst, Little Falls; Lieut. R. C. Radabaugh, Mazeppa.

To New Haven, Conn.: Lieut. L. G. Guyer, Waseca.

To New York City: Capt. H. A. Beaudoux, St. Paul.

Montana—

To Fort Riley, Kas.: Capt. E. M. Porter, Great Falls; Capt. J. H. Riffey, Hedgesville; Lieut. W. A. Hulbush, Geraldine; Lieut. J. E. Fuhrer, Ronan; Lieut. J. M. Graybeal, Belgrade; Lieut. C. L. Smith, Simms.

To Fort Oglethorpe, Ga.: Capt. O. T. Stratton, Cascade; Capt. J. H. Drake, Hardin; Lieut. J. T. Holmes, Polson.

To Camp Grant, Ill.: Lieut. G. F. Turman, Missoula.

North Dakota—

To Hoboken, N. J.: Capt. T. P. Martin, Mayville.

South Dakota—

To Rockford, Ill.: Capt. B. T. Green, Brookings.

Transfers

MINNESOTA OFFICERS

Lieut. N. P. Anderson, Dunnell, from Camp Kearney, Calif., to Camp Fremont, Calif.

Capt. H. P. Bacon, Milaca, from Camp Dodge, Iowa, to Mayo Clinic, Rochester.

Capt. F. G. Blake, Minneapolis, from Fort Riley, Kas., to Camp Pike, Ark.

Lieut. W. J. Carson, St. Paul, from Army Medical School to New Haven, Conn.

Major A. R. Colvin, St. Paul, from Fort Oglethorpe, Ga., to Fort Sam Houston, Texas.

Major J. Frank Corbett, Minneapolis, from Ann Arbor, Mich., to Cape May, N. J.

Capt. W. H. Eaton, Duluth, from Camp Dodge, Iowa, to Camp Custer, Mich.

Lieut. W. J. Eklund, Duluth, from Army Medical School to New Haven, Conn.

Lieut. S. R. Fraker, Cass Lake, from Camp Kelly, Texas, to Camp John Wise, Texas.

Capt. E. M. Jones, St. Paul, from Walter Reed General Hospital to Rockefeller Institute, New York City.

Lieut. F. B. Morrissey, St. Paul, from Camp Dodge, Iowa, to Camp Custer, Mich.

MONTANA OFFICERS

Major F. J. Adams, Great Falls, from Central Department to Camp Custer, Mich.

Capt. E. F. Dodds, Missoula, from Camp Lewis, Wash., to San Francisco, Calif.

Lieut. W. I. Fircy, Roundup, from Camp Kearney, Calif., to Philippine Department.

Lieut. L. P. Gaertner, Three Forks, from Camp Lewis, Wash., to Jefferson Barracks, Mo.

Lieut. J. D. Hobson, Missoula, from New Haven, Conn., to Rockefeller Institute, New York City.

NORTH DAKOTA OFFICERS

Lieut. W. Anderson, Grand Forks, from Camp Lewis, Wash., to Fort Douglas, Utah.

Lieut. W. H. Witherstine, Grand Forks, from Camp Grant, Ill., to Mayo Clinic, Rochester, Minn.

SOUTH DAKOTA OFFICERS

Lieut. L. J. Brockman, Vermilion, from Boston, Mass., to Camp Johnston, Florida.

Lieut. D. W. Craig, Sioux Falls, from Fort Riley,

Kas., to Mayo Clinic, Rochester, Minn.

Lieut. B. H. Sprague, Huron, from Camp Grant, Ill., to Mayo Clinic, Rochester, Minn.

Lieut. R. G. Stevens, Sioux Falls, from Camp Dodge, Iowa, to Mayo Clinic, Rochester, Minn.

Capt. J. D. Whitside, Aberdeen, from Camp Dodge, Iowa, to Mayo Clinic, Rochester, Minn.

ELECTRIC INCUBATOR WANTED

We desire to purchase an electric incubator for bacteriological purposes. State price desired. Address 146, care of this office.

STOCK FOR SALE

Ten shares of common and 10 shares of preferred Standard Medical Supply Company stock for \$900 cash if taken at once. Address 143, care of this office.

OFFICE FOR RENT AND EQUIPMENT FOR SALE

Suite of four rooms. X-ray machine, etc. Will go into army. Practice of about \$6,000 per year. Town of 20,000. Address 142, care of this office.

LOCATION WANTED

A young physician, who is capable, experienced, and exempt from draft, desires a good location for practice either in Minnesota or North Dakota. Address 147, care of this office.

LOCUM TENENS WANTED

Locum tenens wanted for period of three or four weeks beginning September 20. General country practice in a small town seventy-five miles from the Twin Cities. Will pay cash or give percentage. Address 144, care of this office.

PRACTICE FOR SALE

A \$12,000 cash practice is offered for sale. In rich farming community, and no opposition; 65 miles from the Twin Cities; established twelve years, and books will show the exact business done. Must be taken at once. Address 149, care of this office.

PHYSICIAN WANTED

A physician is wanted in a town of 450, situated in a rich wheat country on the Red River. Nearest physicians 17 miles east and 17 miles west and 22 miles south. Our physician left to join the Medical Reserve Corps two weeks ago. Address 145, care of this office.

PRACTICE FOR SALE

In a town of 5,000, only a few minutes' ride from Minneapolis. Collections will exceed \$10,000 cash this year. A suite of fine steam heated offices with exceptionally fine equipment; large territory. An opportunity of a life-time for a man who is willing to work. Can be had for the price of the equipment only. Address 150, care of this office.

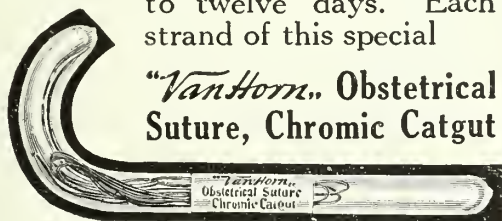
LOCUM TENENS OR ASSISTANT WANTED

In a 16-bed hospital in the county seat in a rich farming community of Southern Minnesota. Must be able to do some major surgery; refraction desirable.

One partner is in the M. R. C. and the other will enter the service soon. Good opportunity for the right man. Preference given to man discharged from service for physical inability, if able to do the work. Address 148, care of this office.

IN THAT CONFINEMENT TEAR

If you favor immediate repair, use our especially chromicized catgut prepared to hold seven to twelve days. Each strand of this special



"Van Horn," Obstetrical Suture, Chromic Catgut

is threaded on a suitable needle, ready for instant use. Indispensable for your surgical bag. One tube in each box. Price, 25 cents each; \$3.00 per dozen tubes. No samples.

OBTAINABLE FROM YOUR DEALER

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

So many cases of

Pruritus, Chafings, and Irritations

are relieved by applying

K-Y Lubricating Jelly

that we feel we owe it to our patrons to direct their attention to the usefulness of this product as a local application, *as well as* for surgical lubrication.

No claim is made that K-Y Lubricating Jelly will act with equal efficiency in every case; but you will secure such excellent results in the majority of instances that we believe you will continue its use as a matter of course.

NO GREASE TO SOIL THE CLOTHING!

Collapsible tubes, 25c. Samples on request.

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

"Sick Headache"

—and other headaches—

are usually relieved more or less promptly as you remove their cause. In the meantime—

K-Y ANALGESIC

locally "rubbed in," will usually afford comfort without blistering or soiling.

Gives Nature's Corrective Forces a Chance

No fat or grease. Samples and literature on request.

Water-soluble. Collapsible tubes, druggists, 50c.



Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT
15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

Hand Disinfection

can be easily and conveniently accomplished by the use of

SYNOL SOAP

This efficient liquid soap enables the physician and surgeon to cleanse and disinfect the hands with gratifying freedom from the irritating effects of caustic soaps and antiseptics. It is particularly serviceable to those who have to cleanse the hands many times each day. Invaluable in the office, operating room and sick chamber.

**ANTISEPTIC—
CLEANSING—
DEODORANT**

Johnson & Johnson

New Brunswick, N. J.

U. S. A.



Whole-Grain Bubbles

Cooked as Grain Foods Never Were Before

Puffed Grains are made by Prof. Anderson's process—by being shot from guns.

First the grains are toasted by an hour of fearful heat. The moisture inside each food cell is changed to super-heated steam.

When the guns are shot the steam explodes. Over 100 million separate explosions occur in every kernel. The grains are puffed in this way to eight times normal size.

The object of all cooking is to break the food cells, to facilitate digestion. But rarely does cooking break even half of them. Our puffing process breaks them all. So Puffed Grains are the best-cooked cereals in existence.

Puffed Wheat and Puffed Rice are whole grains. Corn Puffs are pellets of hominy puffed. All go through this steam-exploding process.

They place three grains at your command, better fitted for digestion than they ever were before.

The Quaker Oats Company

Sole Makers

**Puffed Rice
Puffed Wheat
Corn Puffs**

All Steam-Exploded Grains

PUBLISHER'S DEPARTMENT

REPORT OF THE EITEL HOSPITAL FOR THE YEARS 1912-1917

As most of our readers know, the Eitel Hospital, of Minneapolis, is one of the largest private hospitals in the West, which was established and is maintained without endowment of any kind, and wholly from the earnings of a single surgeon, which makes its story an exceedingly interesting one. This story is briefly and modestly told in the hospital's first report, which covers its first six years of work, from 1912 to 1917, inclusively.

A "foreword" gives a mental picture of the founder's ten or more years of dreaming and planning, while the frontispiece and a half dozen other photographic illustrations show "dreams come true." A group of fifty nurses on the front steps of the hospital is suggestive of the work in this line done within the building, while other views show how very attractive the building is within and without.

But it is the statistics that tell the story of the most interest to the physician and surgeon.

The hospital opened its doors on January 1, 1912, without a patient, and it admitted during that year 993 patients of twenty nationalities, of whom 807 were Americans, and no other nationality gave as many as 50 patients. The number of patients admitted gradually increased until 1917, when 2,326 were admitted. This surely is a remarkable growth for a private hospital of 100 beds, and can be due only to the character of the work done by the medical and surgical staff and the treatment given patrons,—patients and their friends.

The story of the growth of the Eitel Hospital is encouraging to every medical man who would found a like institution, whether of 10 or 100 beds; and it is also encouraging to every community that would establish, or help to establish, a community hospital.

Our cities and villages need hospitals, especially hospitals that will both meet the demand for them and will encourage hospital attendance, which means better public health conditions.

No doubt copies of the Eitel Hospital report can be had upon application.

THE SPENCER BELTS

The fitting, as well as the making, of belts and corsets for suspensory purposes has become an art that must be mastered before a physician's or surgeon's prescription can be filled. The Spencer Company, recognizing this fact, has applied science to its manufacturing in this line, besides employing trained women to work in all parts of the country with physicians and surgeons who demand that their needs be met by intelligence in the shop that undertakes to fill their prescriptions, or orders. Women are especially adapted to this work, and so now there are "graduate corsetiers" to go to the physician or surgeon who has an order to give.

Mrs. E. T. Glaze is in charge of the Minneapolis office, at 236 LaSalle Building, and is thoroughly competent to do the work, and she is equally courteous in her dealings with physicians and patients. She solicits the opportunity to show their appliances of all kinds, and to demonstrate methods of fitting, etc.

HORMOTONE

The G. W. Carnrick Co. believe they have produced in Hormotone a tonic of unusual properties, meeting certain well-defined asthenic conditions that accompany advancing age, menstrual disturbances, chronic cardiac disease, circulatory stasis, etc. The literature of Hormotone is interesting, and the name of the company manufacturing it is a guarantee of its scientific composition and therapeutic value.

The G. W. Carnrick Co., of 17 Sullivan St., New York City, invites correspondence on this subject.

THE POTTENGER SANATORIUM

The Pottenger Sanatorium, located in the mountains near Los Angeles, with a delightful all-year-round climate, is doing a great work in the treatment of diseases of the lungs and throat. The Drs. Pottenger, Medical Directors of the Sanatorium, are known by their work and their writings in the entire medical world, and one who desires to know the possibilities of sanatorium treatment in these diseases should not fail to communicate with this institution, which is a credit to modern scientific medicine.

100 PER CENT AMERICAN

The U. S. Government Alien Property Custodian announces that the Bayer Company, the manufacturers of Aspirin and other Bayer products, is now controlled by him, and the management of the business is in the hands of Government employes, who will continue the business, and will, in due time, sell the capital stock to the highest bidder.

This act certainly removes every possible objection to these products which some people would naturally entertain because such products were manufactured by foreigners with whom our people are at war.

The announcement of the transfer appears on another page.

AIDS IN DIAGNOSIS

The Chicago Laboratory has been in operation since 1904, and has a staff of men of the highest standing in their respective departments of Chemistry, Pathology, and Bacteriology, respectively. Their work is to furnish "aids in diagnosis" by the examination of blood, sputum, specimens, etc. They furnish, free of cost, bleeding-tubes, sterile containers, culture media, and minute and perfectly clear instructions for preparing and sending specimens.

No physician, wherever located, if he has post-office facilities within reach, is justified in practicing medicine if he does not do his own laboratory work or make use of the public laboratory; and he can find no better one than the Chicago Laboratory, 25 E. Washington St., Chicago, Ill.

NUJOL

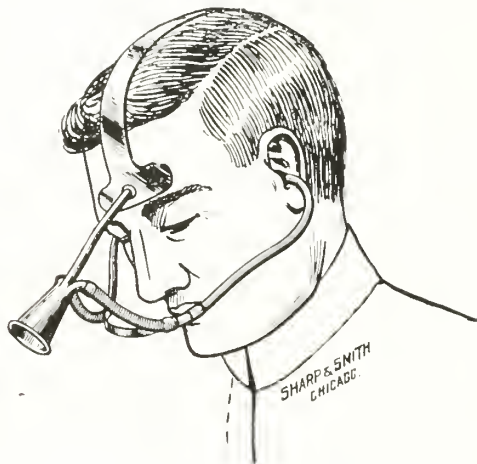
It is to be regretted that so many physicians regard constipation and the resulting stasis which accompanies it, as not deserving of careful and intelligent treatment. It is also to be regretted that in the opinion of some physicians at least, mineral oil is regarded as more or less of a therapeutic fad.

It does not require much time or thought to enable anyone to realize that the prolonged sojourn of fermenting and putrefying material in the intestinal canal, must result in the increased liability to absorption of various and irritant toxic substances.

The term "auto-intoxication" means something. How

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High
Grade Surgical Instruments and
Hospital Supplies

65 East Lake St. - - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY
AND PROMPTNESS ARE OUR
CHIEF AIMS. Send to our nearest
laboratory for fee list and containers
with instructions for collecting all
specimens. These containers will be
sent gratis upon request.

Examination of Pathological Tissue \$5.00

Accurate histological descriptions and diagnoses
of tissues removed at operation should be part
of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and
aerobically and isolate the offending organ-
isms. Pipettes for collecting material for auto-
genous vaccines sent upon request.

Wassermann Test, Blood or Spinal Fluid \$5.00

We do the classical test. Any of the various
modifications will be made upon request without
additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

much it may be made to mean depends upon the attention that is given on the part of the doctor to a study of the subject. To prescribe in a routine manner some drug, or combination of drugs, to secure merely a movement of the bowels, is not to treat constipation and its sequelæ, intestinal stasis and auto-intoxication, intelligently or efficiently.

The value of Nujol in overcoming constipation, preventing stasis, and removing the possibility of auto-infection, has been thoroughly established. The makers of Nujol have planned, and are now putting into execution, a great educational campaign which is designed to emphasize three things: first, the importance of constipation as an etiological factor in the production of disease; second, the danger of a common habit of taking medicine merely to force the bowels to act; and, third, to emphasize and explain the value of Nujol in overcoming constipation and training the bowels to act naturally. To this end, some very interesting and instructive literature has been prepared in the form of a number of booklets, which should be in the hands of every physician, whether he be specialist or general practitioner. Any and all of these booklets will be sent to any physician gratis on receipt of name and address. Samples of Nujol will also be sent if desired.

THE FARMERS AND MECHANICS BANK OF MINNEAPOLIS

We have often spoken in these columns, in terms of the highest praise, of the Farmers and Mechanics Bank of Minneapolis, which was established forty-four years ago, and has maintained in all these years—memorable years for Minneapolis—an unsullied reputation, and the entire confidence of the people. It is a *great* bank in resources and in management. It has had just two active managers (secretary-treasurers) in all the past forty-four years,—Mr. E. H. Moulton, now retired and living in California, and Mr. N. F. Hawley, recently deceased.

Its new and third secretary-treasurer is Mr. Thomas F. Wallace, who, like the late Mr. Hawley, comes from a firm of Minneapolis lawyers of the highest standing at the bar and in business circles. Mr. Wallace is a worthy successor to the honorable and efficient men who preceded him in this position of great honor and great responsibility; and he will maintain the honorable traditions of this bank, which cares for and wisely invests the savings, amounting to over a score of millions of dollars, of all classes of people.

ALKALOL

Success in any line of endeavor depends very largely upon attention to detail. Genius has been defined as to the ability to pay attention to little things.

Common ailments that often come to the doctor for relief sometimes occasion him more trouble in finding the best means for their treatment than more serious conditions. The treatment of conjunctivitis, for example, is apt to be prolonged and unsatisfactory unless Alkalol is used. The same is true of tonsillitis, pharyngitis, and cystitis, all of which speedily yield to Alkalol when properly employed. Alkalol is intended especially for use in relieving mucous-membrane inflammation.

The principles upon which Alkalol acts are physiolog-

ical principles, and the action of Alkalol is entirely different from that of the ordinary so-called antiseptic solutions. Alkalol is designed to help the cells to help themselves. Alkalol is not merely a cleansing agent: Alkalol feeds depleted or exhausted cells, and enables them to regain physiological normal activity. Alkalol is also of great service in the treatment of irritation or inflammation of the skin, and in ulcers, wounds, etc., and may also be given internally.

Any physician will do well to send for literature regarding Alkalol, in order to inform himself as to its composition, mode of action, and method of application. Such literature will be sent promptly on request.

Build up a reserve fund in a Savings Account at the

First and Security National Bank

Capital and Surplus Ten Million Dollars

Marquette Avenue at Fifth Street

We Invite You to Do Your Banking here

"The Home of Thrift"

TO EARN INTEREST

From Oct. 1st, money must be deposited on or before Oct. 10th.

Subscriptions for Fourth Liberty Loan Bonds will be taken here under any plan the Government or the Liberty Loan Committee may suggest.

We safe-keep Liberty Bonds for depositors without charge.

Assets over \$23,000,000.00.

Farmers & Mechanics Savings Bank

115 S. 4th St.

Minneapolis, Minn.

MATERNITY AND SURGICAL CORSETS A SPECIALTY

Spencer Rejuveno maternity corset especially designed for each separate client, with the abdominal support that may be raised or lowered as required. Gives normal figure, comfort and safety

Rejuveno Belts for MEN AND WOMEN Sacro Illiac Corsets - - Sacro Illiac Belts

Graduate Corsetieres listed below:
MINNEAPOLIS, MINN.

MRS. E. T. GLAZE, City Manager, Minneapolis - 236 La Salle Bldg. Tel. Nic. 7455

MRS. MAY ROGERS, Tel. Walnut 878

MRS. ALICE BOOTH, Tel. So. 37

Awarded Gold Medal, highest possible
award, Panama-Pacific Exposition
San Francisco, 1915

MISS ONAH THURSTON, State Manager

MRS. ELIZABETH NOE, Hotel Antlers, Ken. 370; Auto. 51 181

Be Sure You Get
The Minneapolis Milk
Co's Bottling



consumed by the family. ¶ A perfectly pasteurized milk is perfectly free from all harmless germs; and no other milk should be used by either children or adults. ¶ Our milk is scientifically pasteurized at an absolutely uniform temperature as applied from day to day. Every process it goes through is an automatic process, eliminating every chance of contamination. ¶ Physicians can recommend it with certainty that it meets all their demands for purity and for uniformity in the elements that make milk an ideal food, both for the well and the sick.

IT MEANS PURE MILK

METROPOLITAN MILK COMPANY

T. S. 33 377

900 SOUTH SIXTH STREET

N. W. Main 2348

100% American

THE BAYER COMPANY, Inc. is controlled by the Alien Property Custodian and the manufacture and sale of its products are entirely under the supervision of **American Officers and Directors** appointed by him.

As soon as its books have been audited and the property appraised, the capital stock of the Company will be sold by the Alien Property Custodian to **American Citizens**.

All profits as well as all the money realized from the sale of the Company will be used for the purchase of Liberty Bonds to help in the prosecution of the War until the **complete defeat of Germany**.

Therefore, genuine Bayer-Tablets and Capsules of Aspirin as well as other Bayer products can be purchased with full confidence.

THE BAYER COMPANY, Inc.

117 HUDSON STREET

NEW YORK, N. Y.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, OCTOBER 15, 1918

No. 20

INJURIES TO THE PERIPHERAL NERVES AS OBSERVED IN SOLDIERS RETURNED TO THIS COUNTRY FOR RECONSTRUCTION WORK AND CARE*

BY ALEXANDER GIBSON, M.A., M.B., F.R.C.S. (Eng.), F.R.S.E.
WINNIPEG, CANADA

Mr. President and Gentlemen:

I must thank you for the honor you have conferred on me in inviting me to address you today. It occurred to me that it might be profitable if I brought before your notice some considerations bearing upon a class of cases that we see comparatively little of, in civil practice, namely, injuries to the peripheral nerves. In military work, however, such injuries are astonishingly numerous, either as pathological entities standing alone, or, more frequently, as concomitants to a more striking lesion of the bone or soft parts in the neighborhood. In Winnipeg during the last year or so a fairly large number of such cases have been under our care, and, I have no doubt, the coming months will introduce many such cases to your notice. Unless they are actually looked for, injuries of the peripheral nerves frequently escape detection; and, on the other hand, cases are sometimes classed as nerve-injuries where there is no evident organic lesion. This is the large and difficult group of functional cases.

I do not wish to speak to you in the accents of authority. A year ago most of us had comparatively meager knowledge of the subject. Today we are still in the state of pupillage. Nor do I wish to touch upon topics that are of academic,

rather than practical, interest. I wish rather to tell you a plain story of the nerve-lesions that have come under my own notice—of some of the main things one has learned from them, and what general principles guide us in the treatment of them.

In the first place, let us remind ourselves of some elementary points in the anatomy of a nerve. The "nerve" as we meet with it in dissection (for example, the median or the ulnar nerve) consists of a large number of nerve-fibers surrounded by a sheath of connective tissue or perineurium, and possessing an interstitial packing, also consisting of loose connective tissue.

The individual nerve fibers vary in length, diameter, etc., but the essential features are common to all. Each nerve fiber has, as its main essential, the presence of an axis-cylinder. This axis-cylinder is the axon of a nerve-cell, and thus serves to connect directly the nerve-cell in the central nervous system, or its adjacent parts, with the muscle fiber, or area of skin at the periphery. A simple nerve fiber may, therefore, travel from the lumbar enlargement of the spinal cord to the extremity of the great-toe.

The great majority of the axis cylinders acquire, shortly after leaving the corresponding nerve-cell, certain coverings. Of these, the outer is a delicate membrane, beset with numerous nuclei, and known as the neurolemma, primitive

*Read at the 31st annual meeting of the North Dakota State Medical Association, at Fargo, June 19 and 20, 1918.

sheath, or nucleated sheath. Within this there is another covering for the axis-cylinders,—the medullary sheath. It is this that gives the white color to the nerve. It is composed of a fatty material, which stains black with osmic acid. A nerve fiber which possesses a medullary sheath is known as a medullated nerve-fiber. The great majority of the nerve-fibers composing the peripheral nerves are of the medullated variety.

Now, let us ask ourselves what happens when a nerve is cut completely across. If some time has elapsed between the section of the nerve and our examination of the point of section the cut surfaces will be found to be some distance apart. The reason for this is not the same as holds good in the case of a severed artery, for the nerve contains no retractile tissue. As we shall see later, there are certain positions of the limb in which certain nerves are taut, and others in which there is a good deal of slack. Where the nerve is intact a certain amount of sliding within its surroundings can occur. When continuity has been interrupted, however, there is no force acting to approximate the cut surfaces.

Let us consider what happens to each nerve-fiber after section. Changes occur in both the proximal and the distal segments, but these changes are much more evident in the case of the distal segment. All the constituents of the fiber show changes which are characteristic of "degeneration." The axis-cylinder becomes fibrillar in outline, then becomes split into fragments, and finally disappears. The myelin sheath undergoes chemical changes, the staining reactions resemble those of the ordinary fats; the sheath becomes broken into droplets, and these finally disappear. The neurolemma also shows changes. The cells undergo rapid multiplication. At this stage the nerve-fiber consists of little more than the nucleated sheath filled by a structureless protoplasm. This process is known as Wallerian degeneration.

The proximal segment exhibits for a short distance from the point of section changes similar to those described. In the nerve-cell itself the nucleus becomes swollen, and the Nissl granules lose in part their staining qualities.

If circumstances be favorable, however, the nerve path will be re-established. The process by which this takes place is known as regeneration. For long there was furious controversy between the protagonists of "central" and "peripheral" regeneration, respectively. On the one hand it was maintained that the new nerve-fiber grew from the point of section towards the

periphery, the peripheral portion of the nerve furnishing merely a path along which growth might occur. On the other hand it was upheld that each segment of the peripheral portion of the nerve reconstructed anew the fresh portion, so that the process of regeneration consisted mainly in a linking up of a number of new portions. For our purposes we may take it as settled that regeneration is always central, and it may, therefore, be concluded that the longer the distance to be traveled by the new nerve-fiber, the greater is the time required for restoration of function. Roughly speaking, this is the case.

Observations of this nature can be carried out quite well in the laboratory, but we find that the cases we meet with clinically offer a much more difficult problem for solution.

In the cases that we are dealing with now, there are a number of complicating factors. The most important of these is scar-tissue. Almost without exception gun-shot wounds of nerves involve the presence of sepsis; many of them, associated with compound fractures of bone, for example, or with the loss of a considerable mass of soft parts, have been in the track of a discharging wound for months. When, finally, healing occurs, and the necessary period of from four to six months has elapsed after the cessation of all discharge, such a nerve is found embedded in dense scar-tissue, which, as a rule, not only compresses it from the outside, but has penetrated between the fibers, strangling them individually. This scar-tissue is always a disadvantage. It gives harborage to organisms which are only too ready to seize the opportunity of surgical intervention, to become active again. Most important of all, it adds to the length of the nerve segments that have to be removed, for if a trace of scar-tissue be left, the chances of successful repair are correspondingly diminished.

A second great difficulty is that, during the time that elapses between the reception of the nerve and the time of operation, the muscles that are supplied by the injured nerve are allowed to become stretched by their antagonists. Thus various contractures may develop, and, the muscle-fibers being constantly on the stretch, take very much longer to recover their tone. The need for foreseeing these muscular complications is now much more fully recognized, and so by appropriate splinting, by the use of gentle massage and a light galvanic current the muscles are being kept more and more in a condition to respond to the advances of the regenerated nerve-fibers.

Let us suppose now that a case showing some paralysis or loss of sensation has been presented to us. We have several points to make clear:

1. Is there a real nerve lesion?
2. If so, where is it?
3. Is it complete or incomplete?

4. If it is incomplete, is it recovering or is there no progress toward recovery? If recovery be taking place we shall certainly not interfere surgically. On the other hand, if recovery is not being made, or if it is likely to be very deficient, then it is our duty to operate. Here I should like to emphasize the fact that the diagnosis of peripheral nerve lesions is almost entirely a matter of anatomy. We should know the nerve supply of each muscle, and the point where the nerve branch enters the muscle. The sensory distribution of the nerve, the relations of the nerve to other structures at various parts of its course, must equally be known.

Now let us proceed to the examination of the case. In the history there are three essential points:

1. Date of wound.
2. Date of complete healing.
3. Previous treatment.

The time during which pus was coming from the wound gives one a rough idea of the amount of scar-tissue likely to be encountered.

The date of healing is very important. About four months should be allowed to elapse before operating.

The previous treatment, splinting, massage, electricity will aid in forming an opinion as to how ready the muscles may be for the new nerve-fibers.

Objective examination is, of course, of the chief importance. First must come inspection. Note the patient's attitude, watch him in action, look for alterations of shape, color, contour. Assist the eye by the use of a measuring-tape.

Next examine the sensory disturbance. Test with cotton wool for epicritic sensation. Test with a pin for appreciation of sharp and blunt. (A safety-pin is very useful.) Test with the end of a fountain-pen for deep sensation. Map out carefully the areas of loss.

After this there comes the investigation of motor disturbances. One must know the muscles supplied by each nerve, and attempt to make each muscle act independently of its neighbors. The investigation of the motor disturbances is full of traps and pitfalls, for the action of most of the muscles can be mimicked by combinations of

others. A little experience is the best teacher here.

Lastly comes the electrical investigation. Muscles must be tested for their response to faradism and to galvanism. If a response be given to faradism we may take it that the nerve path to the muscle is still present. If no response be given to faradism, but the muscle responds to galvanism, we take it as an indication that the muscle-fibers are still excitable. When the muscle-fibers show no response either to the galvanic or to the faradic current, it is an indication that the process of degeneration is pronounced, and the time of recovery will be correspondingly prolonged.

Investigation thus far will have made clear the answer to our first three questions, and the fourth alone remains to be answered. If we have decided that there is a lesion in a certain definite locality and that this lesion is complete, our duty is clear. *Ceteris paribus* we ought to explore, and attempt a restoration of the original function. This may consist simply in liberation of the nerve from a strangling cuff of scar-tissue, —neurolysis, or in removal of the portion of the nerve-path, which is definitely blocked.

It is the incomplete lesion, however, that causes most hesitation. Here we must ask ourselves, are there signs of regeneration in the nerve below the site of the lesion? Is the rate of progress sufficiently rapid to warrant us in maintaining non-operative treatment, or is progress so tardy that we should step in and attempt to hasten things? The fact that it is exceedingly likely that the necessary manipulation of the nerve is likely to result in a temporary setback further gives us pause. We can ascertain pretty certainly the fact of regeneration or otherwise by tapping the nerve sharply at some point below the lesion. If regenerating fibers are present this action results in a tingling sensation passing to the peripheral distribution of the nerve. The progress of the fibers can be gauged roughly by this method.

To ascertain how rapid is the rate of progress, only one thing can be done, and that is to make careful surveys at a definite interval during which time the patient has been having steady treatment with massage and galvanism. After the lapse of about four weeks there ought to be an appreciable variation in the areas of sensory disturbance, and probably also in the motor phenomena. Here it may be said that recovery of voluntary power in a muscle is likely to precede faradic irritability. When once voluntary power

is definitely re-established, it is advisable to change from galvanism to faradism.

Let us consider for a moment or two now the various types of nerve lesion that are present, and the distinguishing marks of each. First, let us consider the case of complete interruption:

1. *Sensory changes.*—Anesthesia in the cutaneous distribution of the nerve. Deep anesthesia is usually less widespread. The muscles are not sensitive to pressure. There is no pain on pressure of the nerve below the lesion, nor is there formication. There are no symptoms of irritation, such as pain, in the case of a pure interruption. Trophic signs may be present, for example, ulcers or burns due to pressure, or heat or (during the winter) frost-bite.

2. *Motor Changes.*—There is complete loss of tone and absolute paralysis of every muscle supplied by the nerve below the lesion.

3. *Electrical.*—Excitation of the nerve above the lesion produces no response. For a short time after section, excitation of the nerve below the lesion will produce a response. This rapidly disappears, and by the time the cases come under our notice there will certainly be no response to the faradic current. For a considerable time, however, the muscle itself will remain responsive to galvanic stimulation, and the degree of responsiveness will depend very largely on the amount of care that has been given to the muscle.

Most cases, however, as you will see them, present, in addition to complete interruption, some of the phenomena of irritation. The wounds have been septic. There is much scar-tissue. Trophic disturbances are apt to be prominent. The skin will probably be dry, or it may sweat profusely, and the condition of glossy skin will probably be present. There is likely to be a considerable amount of edema and cyanosis. The nails will probably be much curved, possibly ribbed or cracked. The ends of the fingers will probably be narrow and conical. Beneath the nails a curious pad appears. I have seen this present in an ulnar lesion beneath the ulnar half of the nail of the ring-finger and absent from the radial half. The nerve at the point of section will present a bulb of variable size, which may be exceedingly tender, and which may be associated with intense subjective pain. The tendons working the fingers may be adherent within their sheaths, and, unless special precautions have been taken, the muscles will have undergone considerable fibrous degeneration and contraction.

We sometimes find the phenomena of pain develop in a painless wound after liberation of the nerve from the strangling scar. In one such case the pain after persisting for about eight weeks suddenly and completely disappeared, and has not been, since that day, suffered from. In another case, operated on six weeks ago, the pain is still present, and is very severe. In all probability such cases are associated with partial strangulation of individual fibers. In the only case of pure compression that has come under my care, there was no pain and no irritation. This patient presented a curious lesion of the left median nerve. He had moderately good function of the greater part of the nerve, but marked atrophy of the thenar eminence, and complete anesthesia of the forefinger. A piece of metal was present under the skin of the arm, and a bulb was palpable, as I thought, upon the median nerve about the middle of the arm. The metallic fragment was distant about three inches from the line of the nerve. As the metal was subcutaneous, and annoyed him, I decided to remove it. This was done easily, and curiosity tempted me to look at the nerve. The bulb consisted of an aneurysmal varix of the brachial artery, and the median nerve was tightly stretched over this and thinned out by the pressure. The operation was performed three weeks ago, and there has been, as yet, practically no improvement. That will come, however, I have no doubt.

The cases of incomplete interruption are much the most difficult, and also, be it said, much the most numerous. Here we have symptoms of interruption of some of the fibers, symptoms of compression, and frequently symptoms of irritation. A very common condition is the presence of a tender scar which is directly continuous with a nerve trunk. Such cases offer several problems, the most insistent of which is whether or not we should operate. I have already alluded briefly to this, and shall say little more. Such cases demand careful observation for at least one month under efficient non-surgical treatment, that is, appropriate splinting, massage, and electricity, so that we may measure the degree of regeneration as estimated by the progress of formication, the diminution of the anesthetic area, the acquirement of hypersensitiveness in the muscles or skin, the resumption of motor power, or responsiveness to the electric current.

We have to determine whether regeneration is likely to be speedy or too long delayed, and whether it is likely to be at all complete. On the one hand, conservative measures too long pro-

1. In this case recovery is now (March 10, 1918) almost complete.

tracted mean that valuable time is lost. On the other hand, surgical intervention means almost certainly that some damage is done to the regenerating fibers, and the degree of final recovery cannot, with certainty, be predicted. Again, in certain situations, notably the axilla, an almost intact nerve may be passing in close relation to others that are damaged, and in dissecting it free from scar-tissue, the good nerve may be injured. I recall a case where, in trying to repair the median and the ulnar in the axilla, the mass of scar tissue involved the third part of the axillary artery. This was injured, and in controlling the hemorrhage the musculo-spiral nerve was injured. Recovery in this case is going to occur, but for a good many months the patient has had a musculo-spiral lesion superadded to the median and ulnar ones. Even when we expose such a nerve the problem is a difficult one. Hitherto I have never been bold enough to remove the scarred segment entirely, although at times the temptation has been considerable.

Suppose, now, that our measures are proving successful, and that recovery is taking place, what signs are we to look for and how soon will they be present? In any individual case it is impossible to say. There are, however, at least five points to look for, and I shall take them in the order in which experience has led one to expect them to occur:

1. *Sensory Recovery*.—Here deep pressure will practically always produce a response before superficial stimulation does. The area of muscle is usually hypersensitive. Similarly a skin area may be exceedingly sensitive, interfering with the pressure, for example, of a boot or requiring the patient to wear a glove.

2. The return of deep sensation is practically always accompanied by the filling out of atrophied spaces, for example, in the case of the ulnar, the hypothenar eminence, and later the interosseous spaces lose their flattened or sunken aspect.

3. From a very early period also the presence of sensitiveness to percussion, at a level below the lesion, can be made out. It is said that this enables one to trace accurately the level of regenerating fibers. That is roughly true, but, on the other hand, one can recall cases where the muscles of, say, the hypothenar eminence were sensitive to deep pressure, while light percussion produced no effect below the level of the middle of the forearm.

4. Motor recovery is usually rather later, but it may appear at any time after, say, six weeks.

Voluntary power in our experience has usually preceded responsiveness to the faradic current.

5. For lack of apparatus, however, we have been unable to estimate quantitatively the amount of the stimulus applied. Galvanic stimulation, on the other hand, usually produces a distinct effect as long as the muscle fibers retain the characteristics of muscle, or as soon as they regain these.

TREATMENT OF CASES OF NERVE INJURY

There is one and only one principle in the non-operative treatment of nerve injuries, and that is that the muscles must be maintained as long as possible in good condition. This involves both active and passive treatment. On the one hand, very light massage and mild galvanism should be applied daily for months, if necessary. On the other hand, we must bear in mind that a paralyzed muscle should never be overstretched. If the maxim, "Never allow a paralyzed muscle to be stretched," were engraved on the heart of every medical man, what a reduction there would be in the number of deformities one sees! The prevention of overstretching applies without exception to every peripheral nerve injury, and usually means the use of a different splint for each type of case. In practice these reduce to comparatively few. The cock-up splint for musculo-spiral paralysis, the night-shoe and short-calliper splint for peroneal nerve injuries; with these two alone, one may do much good. One must think what muscles have been injured, what the action of each is, in what position it will be most relaxed, and how it can be kept in that position.

As regards operation: The surgery of peripheral nerves calls for a considerable variety of surgical procedures. Many have been recommended. Some of these have been unprofitable in our hands. One of the rules generally laid down is never to use a tourniquet. I presume the risk is that of a subsequent paralysis. We always employ a tourniquet where it is possible to use it. We have never, as yet, had cause to regret doing so. The difference in time when one has a dry field of operation is enormous, and when one is doing a good deal of delicate dissection through oozing scar tissue, for example, of individual nerve fibers, the gain in accuracy is very great. With proper precautions the risk of reactionary hemorrhage is comparatively slight, and, in my opinion, the advantages considerably outweigh the disadvantages.

Again, one hears of silk being advocated as

suture material, or chromic catgut. We never use anything but plain catgut, and I cannot see why anything else should be necessary. I am certain that one of the main things is to avoid tension, and in that case coaptation sutures are all that is necessary.

To avoid tension one is at times forced to employ various expedients. The most useful of these is flexing adjoining joints, for example, in the case of the median in the forearm, flexion of the wrist and of the elbow will give one considerably more chance of apposing severed ends. This position of flexure we maintain by plaster of Paris for six weeks. A mid-position is then obtained by another plaster splint, this being worn for two weeks more.

Another important point is that all the scar tissue, that is, both proximal and distal bulbs, must be removed. Indeed, successive sections must be made until the nerve shows cut nerve fibers, and these only. In our earlier cases we sometimes felt satisfied with removing the greater part of the bulb, above and below, but experience has taught us fully that the best and most rapid results are obtained when raw edges are brought accurately together.

Another device is that of displacing the nerve. The example usually quoted is that of the ulnar nerve at the bend of the elbow. Displacement of this in front of the internal condyle certainly gives one considerably more chance of apposition, but such a maneuver should always be performed with the reckoning that the branch of supply to the flexor carpi ulnaris must be specially cared for, inasmuch as this twig arises from the ulnar nerve just after the nerve has left the space between the internal condyle and the olecranon process.

With these principles in view, what types of operation are likely to be called for?

1. *Neurolysis*.—Simple liberation from scar-tissue. One case in which this was done was, curiously enough, a military case where a dislocation of the elbow had occurred. This was followed by an almost complete lesion of the median below the elbow. Atrophy was very marked in the flexors of the forearm and the muscles of the thenar eminence. The nerve was found strangled by a cuff of fibrous tissue extending for about one and one-half inches of its length. I am inclined to think that the lesion had been a hemorrhage within the sheath of the nerve, and that the blood clot had later become organized.

2. *Partial Suture*.—This is undoubtedly the

operation of choice when it is possible. A case in point is a lesion of the ulnar nerve at the bend of the elbow. Careful dissection revealed two intact fibers, and these were carefully preserved, the remainder of the nerve being cut saucer-wise, and the raw edges being brought together. This is the most rapid result we have had, function being practically completely restored in three months.

3. *End-to-End Suture*.—This is the operation that will have to be performed most frequently. The general principles of this have already been dealt with.

In the foregoing cases there has been little or no difficulty in securing coaptation. A more difficult class of case, fortunately not so numerous, is that where coaptation is not possible. We have tried several devices in connection with this:

1. *Lateral implantation of proximal and distal nerves into an intact nerve*.—In one case the external popliteal was thus inserted into the internal popliteal. The result was entirely unsatisfactory. A second operation was performed, and by means of plaster-of-Paris casts keeping the knee-joint fully flexed, the ends were brought together. Within two months the signs of regeneration were most encouraging.

2. *Nerve Grafts*.—Here a portion of a sensory nerve was removed to act as a bridge. Four of these have been done:

(a) The posterior tibial nerve, the external saphenous being used as a graft.

(b) The musculo spiral, the superficial radial serving as a graft.

(c) The posterior interosseous, the internal saphenous nerve being taken from about the level of the knee-joint.

(d) The ulnar nerve in the forearm, the internal saphenous being employed here also.

In none of the four has the result been encouraging.

3. *The Use of a Catgut Bridge*.—In one case of lesion of the ulnar in the forearm the cut ends, after full flexion of the wrist, were still separated by a gap of over an inch. Two stay-sutures of No. 2 plain catgut were used, and a fascial wrap from the thigh made use of. Ten weeks later there are signs suggestive of regeneration, but it is too early as yet to speak positively about the result.

4. Another method is that of turning down a flap of nerve to act as a bridge. Of this I have no experience.

5. Another method that has suggested itself,

but which I have not as yet carried out is that of Z-shaped section of the nerve, sliding one segment past the other as in a tenotomy of the tendo Achillis. This method also I have no experience of.

Sometimes we are obliged to give up the idea of restoring nerve function, and then tendon-transplantation may be performed. This is notably the case in the posterior interosseous nerve, and in the external popliteal. One of the nerve-graft failures has had this performed with so far encouraging results. His extensor carpi radialis longus was acting well so it did not require to be dealt with. The flexor carpi radialis was transplanted to the extensor longus pollicis and the extensor indicis proprius. The flexor carpi ulnaris was transferred to the attachment of the extensor communis digitorum. The patient already has considerable power of extension of the thumb and fingers, and we look for still further improvement.

Another point that may be worthy of mention is the use of some material to form an insulating tube around the nerve function. Many substances have been used, for example, fresh vein, formalinized arteries, decalcified chicken bones, tubes of magnesium, etc.

The only substance we have used is a tube of

the deep fascia over the vastus lateralis muscle. The results have been such as to lead us to conclude that it does no harm, may sometimes do good, is usually unnecessary, prolonging the operation, and that it forms no substitute for accurate co-aptation without tension. We apply it with the fatty side inwards.

A word must be said in regard to prognosis. There is a widespread impression that nerve injuries are almost hopeless with an invariably gloomy prognosis. This is hardly justified. In the first place, a very large number, probably 60 to 70 per cent, will attain a large measure of recovery without operation. All of these, of course, are cases of incomplete division. Of those operated on the great majority, probably 90 per cent, will show improvement, which may proceed as far as complete recovery, provided adequate non-operative treatment is given, and especially if the paralyzed muscles are kept relaxed, and if deformities are foreseen, and guarded against. Nerve injuries demand for their treatment faith on the part of the surgeon and confidence and steady co-operation on the part of the patient. In spite of the call for patience, you will find that lesions of the peripheral nerves are supremely interesting, and there are few classes of cases where your patient's gratitude will be more sincere.

EXPERIENCES IN FRANCE*

BY R. D. WILSON, M. D.

Captain, C. A. M. C.

ABERDEEN, SOUTH DAKOTA

Hospital Trains.—The majority of patients admitted to general hospitals are brought down in hospital trains.

Hospital trains at the beginning of the war were not much further advanced than those used in the South African campaign. But both France and Germany had relied for railway transportation of the wounded on the same means which served the purpose in the war of 1871. Except for frames for carrying the stretchers placed on floors of the merchant vans, no special arrangements appear to have been made. Trains bringing wounded from the front had no permanent arrangement for cooking, no sanitary conveniences, no carriage for water—merely a string of trucks

with no means of intercommunication. Due to a small difference in railroad gauges of the French and English lines, transferring English hospital trains into France was prevented. This difference was remedied by the officers put in charge, so that now we have efficient, if not luxuriously appointed, hospital trains.

One word should be added regarding the fleet of improvised barges which run on the canals between the front and two of the general hospitals. There is no doubt but that the smooth passage of the boats provides the acme of comfort to patients to whom the unavoidable shaking of a railway train entails both pain and harm.

Wound Treatment.—The advance that the treatment of septic wounds has made in this campaign (to start from an unfamiliar standpoint)

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

has been but slow. Practical application has demonstrated the superiority of the Listerian principle and method, but the many chemical media employed afford evidence enough of the difficulty met with in establishing any one means as that suitable for every class of case, also the urgency for an early primary mechanical cleansing and exposure of the wound-cavity, and the importance of maintaining the wounded part at rest. The latter point raises the first great difficulty to be met by the military surgeon—the absolute necessity of early transportation for the wounded men. Speaking generally, it has been shown that, if the primary mechanical cleansing of the wound has been carried out, no further gross intervention should be necessary. From the surgeon's point of view free incisions are never objectionable. The cleansing of the wound is the most important; that is, removal of the shell fragments and particles of clothing. If this is not done, the entrance of anaërobic bacteria may mean the loss of the entire limb. The conditions of war inhibit this treatment, for there are times when the wounded men cannot be taken out of "No Man's Land" for several hours or days, or cared for when they are so numerous that you cannot take proper care of even the milder cases. Many of the slight wounds are excised and sutured up, but the more serious cases are suffering locally, and generally have every grade of infection from the slight to the most severe. Vastly more difficult is the problem in patients arriving in the stage of acute development of infection. The wound has already been primarily treated, and the question arises whether further surgical intervention will effect improvement or lead to increased extension of the infection. The delay may be fatal to life or limb if the infection is an anaërobic one. In the aërobic infection an interval of rest often results in a rapid subsidence both of local signs and general symptoms. The treatment adopted consists in maintenance of rest, moisture and antiseptic applications. In the earlier stages of the war numerous antiseptic solutions were used, also the hypertonic saline solutions, but of late, in the great majority of cases, solutions of which the active constituent is chlorine have found more favor, and have proved the most satisfactory in practice. Eusol and, with gradually increasing frequency, the Dakin-Daufresne solution of hypochlorite of sodium are those most commonly resorted to. Eusol was used as a moist gauze dressing and in combination with ordinary rubber drainage tubes. For the Dakin solution the

Carrel technic is used. Some cases have been treated by primary suture, the salt pack, closure after introduction of iodoform, bismuth subnitrate, and paraffin, solution of brilliant green, acriflavin and proflavin. Experiences which have been gained as to the technic of the treatment of septic wounds cover three points:

Drainage, irrigation, and baths.

Drainage.—Drainage was carried out in the early part of the war by tubes of large caliber, and these were retained for long periods. The objections to this method are, first, the tendency of the tube to form a localized channel; second, the presence of a foreign body in tissues capable of exerting injurious local pressure; third, the establishment of a tract which would shortly convey infection from the surface to the base of the wound; fourth, the difficulty in determining the proper time to remove the tubes after their prolonged stay.

The tube is now retained to a certain extent, but in many cases it is not employed at all; but in its stead the curtain method is used, which is best illustrated by Carrel's and Rutherford Morrison's systems, respectively. In Carrel's method, wound surfaces are kept apart, not by the installation of tubes, but of a fluid constantly renewed, using the light gauze packing to retain it. In Morrison's method a thin, light antiseptic medium covers every part of the surface of the exposed tissues, and forms a curtain which allows for the escape of such fluids as may collect in the wound. Drainage afforded by the salt pack is of similar character.

Irrigation.—Continued irrigation has gradually lost favor. It is inconvenient for the patient, and it forms definite runlets. Periodical flush is being used in its stead.

Baths.—Antiseptic baths have also lost favor since the development of more efficient antiseptic methods. The fresh wound, if gotten within six hours and treated by the Carrel-Dakin method, can be rendered sterile in six days; those gotten later (within twelve hours) can be rendered sterile in twelve days, and a compound fracture in three weeks. The importance of a bacterial count for the proper time of wound-cleansing cannot be over-emphasized. It is difficult to use this method when there is a rush of wounded men, but attempts are being made to carry it out in busy times, as well as during quiet times. It has one advantage over all other methods of treating wounds—the production of a supple scar and not causing trouble by the subsequent contraction. Morrison's method avoids

tedious and careful manipulation essential to the success of the Carrel method, saves time on the part of the surgeons and nurses, and the patient does not have to undergo the discomfort of repeated dressings. In suppurating wounds it has attained great success. The cicatrix is inferior to that following the Carrel treatment. The inclusion of bismuth and iodoform has some disadvantage, both near and remote. Transferring these cases from a field ambulance to the C. C. S., with the shaking of the trains or motors, causes a discharge of the composition, and no appreciable benefit has been conferred. It may be said the Listerian principle has been more nearly attained by Carrel's method than by any other in use, and the results are of a more satisfactory nature; nevertheless it must be allowed that an ideal antiseptic medium remains to be found, and that may be found in Flavin.

Secondary Hemorrhage.—In the light of modern surgery secondary hemorrhage has been deplorably common. Little new has emerged from the experience of the war; but the frequency with which transfusion of whole blood has been employed to counteract the effects of the accident, does show some advance in treatment. The new treatment of septic wounds offers the best chance of reducing the frequency of secondary hemorrhage. Bullet-wounds are a variety in which incomplete primary lesions of the blood-vessels are more common than in any other. The perforation of a vessel-wall up to a certain date is more commonly the result of the separation of a slough of primary devitalized tissue than due to the extension of a process of ulceration from without. Some vessels are much more liable to secondary hemorrhage than others, especially arteries which lie on a fixed bed, for example:

1. Circumflex branches of the axillary.
2. Subscapular or postscapular.
3. Gluteal artery.
4. The articular branches of the popliteal.
5. Circumflex branches of the profunda femoral.
6. The femoral in the lower part of Hunter's canal.

And it may be very troublesome to deal with these arteries. Another peculiar thing is the frequency with which large vessels in mobile spots, such as Scarpa's triangle, may escape damage by displacement, and lie exposed on the surface of a large open wound. Means of dealing with these are direct local ligating, forceps pressure, local plugging, and in emergency cases proximal ligation. The treatment of these cases depends

upon the degree of septicity of the wound. If the arterial wall is not harmed, and the wound looks as if it would respond to treatment, nothing needs to be done, but, on the other hand, if the vessel is thrombosed, it should be ligated above and below the point of thrombosis.

In patients where secondary hemorrhage has occurred, internal remedies, such as calcium lactate, have proved useless, and the main treatment is transfusion of whole blood. The methods employed are Kimpton tubes and the Unger two-way stop-cock for direct connection of the artery of the donor to the vein of the recipient by a paraffin-coated tube and employment of Record syringes. The Canadians were the first to use this treatment to any great extent. Generally speaking, the good results have been in cases of pure anemia. When the anemia has been due in part to hemorrhage and in part to septic infection, the process has not been so satisfactory, and has been more successful in primary than in secondary hemorrhage. Hemolytic tests should be made on the recipient and the donor before the procedure, but this is not always possible in the army.

Gas Gangrene.—Acceleration in transportation of the wounded consequent on a shorter, quicker journey, does not allow as many of the bad cases to arrive at the base hospital; nevertheless the insidious manner in which the process starts, the rapidity with which it spreads, and the tendency which exists for delay in its development—all tend to maintain a constant supply of cases to the general hospital. It was thought previously that the subcutaneous tissues of the limbs were the only parts to be affected; more extensive observation has shown the fallacy of that assumption. It is now well known that the contents of the cranial cavity, the pleura, the pericardium, and the peritoneum and the muscular planes of the trunk are all attacked with varying degrees of frequency.

Another question which is at present undetermined is the relative frequency with which patients die from a pure toxemia or from an actual septicemia. Very few cases have shown a cultured blood. From observations it has been shown that at an early stage a general infection is not uncommon. In Boulogne at an early stage in the war, patients arriving with gaseous cellulitis of the limbs had local patches at the sites of hypodermic injections; some followed the saline infusion introduction. In some cases gas was voided with the urine, and in one of these a culture of *bacillus perfringens* was made from the urine.

Results of this infection quite commonly are local thrombosis and metastases in other parts of the body. The rapidity of the spread of the infection in some cases suggested a pure toxemia, which is supported by enlargement of the limbs due to toxic edema independent of the presence of gas. Major Rowland found that the filtered fluid from such cases caused general edema and death in a few hours when injected into guinea-pigs or rabbits. Some say these cases are a true cellulitis, but its frequency and the extent to which muscles are affected has led some observers to speak of anaërobes giving rise to the condition as muscle-feeders. Organisms can establish no footing in the body in the absence of either dead tissue or some foreign body.

Major Carter Webb established the fact that a diagnosis of gas in the tissues can be made by the x-ray. Gas may follow one muscle if the muscle has been the site of the wound or injury, and thus follow the course of blood-vessels.

The rapidity with which the cellulitis spreads depends on tension in the special area afflicted and the virulence of the organism or organisms and the degree of interference with the vascular supply of the actual organism or combination of organisms causing the different types, as the soft edematous limb or tight drumlike or emphysematous varices.

Another point of interest not cleared up is the rapid hemolysis in one case accompanied by development of a more or less intense jaundice, while other patients show an extreme anemia just before death. Anemic persons die most rapidly, and the difference may depend entirely on time, since the characteristic brilliant orange-colored discharge from the wound met with in mixed infections is rarely observed before three or four days.

The deficiency in blood in rapidly fatal cases is indicated by low tension of the pulse and by knocking sounds in the great arterial trunks, which gains some intensity as in patients dying from pure hemorrhage, and a consequent fall in diastolic pressure. The knife is our only aid in treatment of these cases, removing dead and foreign tissues and reducing tension in the structures affected.

Where amputation is indicated the one principle to be adhered to consists in the maintenance of an open stump. Where the incision has been made through edematous tissues the latter drain freely, and no further extension takes place.

Sir Almroth Wright wrote a paper describing conditions which control growth of the bacillus of

gas gangrene in culture media and in the dead and living organisms. He stated that intravenous injection of sodium bicarbonate may prove a means of combating this toxemia.

Tetanus.—The terrible scourge which gave rise to so great anxiety in the fall and winter of 1914 has become a comparatively infrequent wound complication since the adoption of prophylactic injection of antitoxin in all cases of wounds and in cases of trench foot accompanied by vesication. Cases do occur because of late injections when patients have been delayed in transportation. Special idiosyncrasy may account for others. It was recognized that the protective influence disappeared in eight days, which called for a general order that patients whose wounds were not progressing well should have doses repeated every seven days. Cases of every degree occur. Acute cases with general spasms, slight cases in which trismus is the main feature, tetanus of the paralytic type or chronic spasms of the muscles of mastication, splanchnic tetanus and local tetanus of limbs, besides the delayed type. Of the methods of treatment as a curative measure the intramuscular and intrapleural methods are used the most. Intravenous method produces characters of anaphylaxis. Intrapleural method has produced local inflammation, nevertheless it has been used the most. The carbolic acid and the magnesium sulphate treatment have been discarded. Prognosis has depended on the incubation period, and in spite of treatment the mortality has remained above 70 per cent. Symptomatic treatment by chloroform and morphine has retained its character, both in relief of suffering and as a curative measure, especially the former.

Other Wound Infections.—One form of streptococcal infection deserves special mention as possibly corresponding to hospital gangrene, described as the membranous variety. A wound may, all of a sudden, become covered with a thick membrane, adherent to granulation tissue. The membrane is very similar to the diphtheritic membrane. When, after formation of the membrane, a white edema spreads up the limb, and the patient meanwhile suffers from a toxemia, incision allows a thin serous fluid to escape, which terminates readily in a cure.

Septicemia.—This is usually due to a streptococcal infection; but it cannot be said that any advance in treatment has been made. Intravenous injection of hypochlorous acid in the form of Eusol was given, but no satisfactory results have been obtained. The same remark can be made concerning colloid chloride of gold. Dakin has

shown that the injection of Eusol must be small in consequence of the minute amount of the antiseptic in proportion to the volume of the patient's blood.

Fractures.—In the early part of the war when wounded men were streaming into the improvised hospitals, it was evident that neither the regulation outfit of splints nor the emergency splints manufactured by the mechanics attached to such hospitals sufficed to cope with the large number of fractures admitted.

The H. O. Thomas class of splints were the most advantageous for military use, so a central factory was put up at Boulogne to supply splints to all hospitals and medical units in France.

The first question which arises in connection with these cases is the relative importance of the primary treatment of the wound of the soft parts or the adjustments of the bony parts themselves. As a general rule, reduction of the fracture and maintenance of extension has been adhered to. In trying to reduce or set a fracture after a septic infection, you are very liable to light up the old infection. In France extension has been put on in the long axis, because of the adaptability of patients to modes of transportation. In some cases a good position of the fragments cannot be obtained unless the joints are flexed—for example, the upper and lower thirds of the femur. To meet this difficulty the Thomas splints have been bent, or other methods employed, for instance, Hogden's splint for the upper one-third of the femur, or a swinging frame of the same dimensions as the bed. Two methods of extension used most are, first, Buck's extension; second, the extension used on a Thomas splint with stirrup; and, third, that of a continuous screw. Pin transfixing has not been used very much because of making new wounds in a limb that is already septic. The Balkan method devised by Colonel Miles consists of an overhead rail for suspension of limbs and two pulleys at the head of the bed so as to allow the patient to move himself. Plaster of Paris has been used very little. When used it was mostly for purposes of transportation. Proper cleansing, drainage, and removal of shell fragments and foreign bodies have, it can be assumed, been done at the casualty-clearing station. The object in view, an early closing of the wound, obtained by a continuous antiseptic method, should be carried on. Up to the present time the most conspicuous success in this direction has been attained with the Carrel-Dakin method. The wound in the majority of cases may be closed in three weeks. In

suppurating fractures of some standing, Ruth-erford Morison's method of secondary closure, after introduction of the iodoform, bismuth, and paraffin compound, which is imported from England, has given good results. Chronic osteomyelitis cases are usually sent to England, where a prolonged stay in the hospital is assured. Radical treatment of this condition has not often been undertaken. Methods of mechanical fixation by plates, wires, and screws have been used very little on account of the septicity of the wound.

Anesthetics.—At the beginning of the war chloroform was in general use, but it has been discarded in the majority of instances and ether has been largely used and was formerly administered by the open method, but it is often inadvisable because having been exposed to wet and cold in the trenches for several months, the wounded are suffering from catarrhs of varying degrees of severity, and it has a great tendency to irritate these inflamed surfaces. Pneumonia and bronchitis conditions are usually set up; especially is this true in abdominal wounds.

Dr. Shipway's apparatus for administration of warm ether vapor is used altogether at the front. It has the following advantages:

1. There is less sickness due to the lessened quantity of mucus swallowed.
2. There is very little secretion of mucus or saliva, and the patient is very quiet during the operation.
3. One-third of the quantity of ether is used in this method as compared with the open.
4. Patients suffering from shock or hemorrhage can be pulled through with less collapse.
5. It can be administered with oxygen by connecting up with the oxygen tank.

In conclusion, I wish to enumerate the operations performed at one casualty clearing-station in France:

A. Ligature of arteries:

Carotid	5
Vertebral	2
Subclavian	2
Axillary	15
Brachial	39
Radial	18
Ulnar	8
External iliac	2
Femoral	51
Popliteal	31
Anterior tibial	16
Posterior tibial	58
Miscellaneous	30

B.—

For treatment of fractures of	
the skull	189
Vertebrae	18
Humerus	298
Fore-arm	133
Femur	209
Leg	309
Jaws	38
Miscellaneous	119

C.—

For treatment of joints and	
knee	183
Other joints	64

D.—

Amputations, shoulder-joint...	14
Upper arm	77
Fore-arm	31
Thigh	186
Knee	10
Leg	76
Ankle	6
Miscellaneous	31

E.—

For drainage of the pleura....	49
For wounds of the abdomen...	106

G.—

Removal of testes	33
-------------------------	----

H.—

For rupture of the urethra....	9
--------------------------------	---

J.—

Enucleation of the eye.....	43
-----------------------------	----

K.—

Plastic operations	33
--------------------------	----

L.—

Tracheotomy	17
-------------------	----

M.—

Excision and clearing of	
wounds of head and neck...	95
Upper arm	249
Lower arm	765
Multiple	398

N.—For conditions not due to gun-shot wounds:

Appendicitis	34
Strangulated hernia	1
Cellulitis	53
Miscellaneous	13

THE INFLUENZA IN THE EAST

By W. R. KING, M. D.

BOSTON, MASSACHUSETTS

The following graphic account of the epidemic of "Spanish Influenza" in the East came in a letter (under date of October 3) to Dr. J. Warren Little from Dr. W. R. King, who was formerly an interne in Hillcrest Hospital, and is now a resident physician of Peter Bent Brigham Hospital, Boston.

We publish the letter without Dr. King's knowledge, and without being able to give him an opportunity to revise it. Its informal letter style increases its interest.

Dr. King will soon return to Minneapolis to become associated in the work of Hillcrest Hospital.—THE EDITOR.

We have been swamped with influenza patients, a large number of whom have had pneumonia. We have had 387 cases in the past three weeks. Of all admissions 20 per cent, or about 80, have died. About 50 to 60 of our nurses have been sick, mostly with rather mild attacks, and five of the house officers are now off duty. Dr. West, the resident physician, has been off about ten days, and probably will be convalescing for weeks yet. The number of cases, coupled with a shortage of help, has about doubled our work. The health authorities are optimistic about a near end

to the epidemic. A good many doctors have been or are sick and numerous deaths have occurred among them.

In general, all of this section of New England has been hard hit and I should guess that about 50 per cent of the people have had the disease, and perhaps five to ten per cent have had pneumonia, with a mortality-rate over 50 per cent of the pneumonia cases. All towns, hospitals, and military camps have had about the same experience. At Camp Devens, 35 miles from Boston, there are 40,000 men, and a week ago 16,000 were on the sick list with influenza. They had deaths at the rate of 60 to 100 a day. The disease appeared at Commonwealth Pier as a batch of sailors and soldiers from abroad landed on August 27th. In a very short time it was going like wildfire. The article by J. J. Keegan in the *Jour. of the A. M. A.* for last week has all the essentials in it. Their experience has been duplicated by us in all details. I suppose it will be but a matter of weeks or days before it hits the

Middle West, but I hope you will not have the same experience we have had, especially as regards sickness and deaths among medical men.

* * * *

Here in New England there has been a constant cry for more nurses and doctors, and in the West with fewer large hospitals and very likely a smaller percentage of medical men per 1,000 population, the experience may be still harder to take proper care of the patients. It is not at all uncommon here to have a patient come to the hospital who has not been able to get a doctor to call at his home for several days. (Since writing the last line, two more house officers have been sent off for a rest of twenty-four hours because they have been on the job for several days with but a few hours of sleep at night.)

Patients come to the out-patient department and to the hospital at night, and are sick enough to be put on the "dangerous list." There have been three so far who have come to the out-patient department who were sent to the hospital and died within twenty-four hours. It seems that here, about Boston, the disease is more virulent than in other sections, although perhaps this is not always true.

An interesting and unfortunate thing we have observed is that all of our sick women patients who have come in pregnant have miscarried quite promptly, and all have died. This experience is also the same, so I am told by an obstetrician, on the outside.

A good many of our women patients have had bad cramps in the abdomen associated with nausea and occasionally vomiting, and have started flowing again although their last period was only one to two weeks before. There seems to be very little relief from the nausea and cramps, save by onset of the flow by morphine, $\frac{1}{8}$ - $\frac{1}{6}$ gr., p. o. Usually, one dose lasts 12 to 24 hours.

A fairly large percentage of our cases have had sinus infections, mostly frontal and maxillary. These cause very great discomfort, but are relieved somewhat by cocaine, 1 per cent, and adrenalin, 1-1000, in equal parts used p. m. as a spray in the nose. Phenactetin, 5 to 10 gr., combined with codeine, $\frac{1}{4}$ - $\frac{1}{2}$ gr. usually gives a night's sleep. They usually clear up in a few days to a week. None have required operation. Three cases have had middle-ear infections which required drainage.

Our cases run over 40 per cent pneumonias,

and there have been about 80 deaths. Autopsy shows, usually, broncho-pneumonia of one or both lobes posteriorly, sometimes confluent, so as to be similar to lobar pneumonia. The patients who die early show a great deal of hypostasis, and usually the lower parts of both lower lobes of the lungs behind, and the lower parts of the middle and uppers, show patchy consolidation. Seldom is there any pleural exudate of purulent or serous nature. One case showed acute yellow atrophy of the liver, three have had acute nephritis and marked destruction of the kidney substance. Other organs show no constant change. In cases which linger for ten days or more the lungs show miliary abscesses. Cultures from the lungs show bacillus influenzae colonies on blood agar in about 50 per cent of the cases, often combined with pneumococcus, staphylococcus, or other variable organisms. Blood cultures, even in fatal cases, remain sterile.

Clinically, the course of the disease may run as follows: Slight malaise and a tired feeling for a day or so, the patient does not sleep well, and may get chilly or have a chill and fever associated with aches in the muscles and bones, most often headache (frontal), backache, and pains in the arms or legs. The temperature may go to 102° to 105°, and remain so for 24 to 48 hours, during which time the patient is very toxic and drowsy, and usually lies in the same position asleep all day, partly because of pain on motion, but partly from inertia. At this time there are usually headache, coryza, rhinitis, and harsh barking dry cough, which usually wears the patient out, and increases the pain greatly.

If all goes well the temperature falls in 24 to 48 hours to 100° or less, and the patient feels quite well, but still "pepless," and has no appetite. On the next day he may have a small rise in temperature to 101°-102° which may be associated with sinus involvement. This may last for a day or two, and then the temperature falls and remains normal.

We keep uncomplicated cases in bed for two days after normal temperature, and then allow them up for three or four days before discharging them. They may go back to work as soon as they feel perfectly well, in a few days to a week. They often feel weak and spiritless for several days to a week after getting up.

In a pneumonia case the patient may be toxic from the start, and the temperature usually stays over 103° for a week or more. The pulse is usually slow,—from 80 to 100—and the respira-

tion is usually not over 24 to 28, unless a large area is involved. If this temperature goes over 104° and stays for several days, it is of bad prognostic import. In our cases only two have recovered. Other cases begin rather mildly, and the patient keeps on his feet at work, and then develops pneumonia.

Any patient with a temperature over 104° should be watched.

The physical examination does not usually show anything on percussion, but on auscultation bronchovesicular breathing with crackling râles may be found, usually in the lower lobe posteriorly just beneath and inside of the angle of the scapula. These signs may be limited to very small areas (1/2 to 2 inches in diameter), and will bear watching.

As a case progresses signs spread, and all the time auscultation signs are more constant than percussion, fremitus, etc. In a bad case both backs fill up, and the picture becomes essentially pneumonic with faint consolidation, and usually the patient has very much more marked cyanosis than is explainable on purely physical findings, probably due to smaller areas and also to possible methemoglobin formation. Practically all cyanotic patients die, and all those markedly cyanotic die, no matter what is done for them. All that can be done with drugs is to put the heart under digitalis effect, give adrenalin, cc. sc., repeating in twenty minutes for relief of dyspnea in cases where the lungs are full of moist râles.

As far as known we have saved only one case by heart stimulation, and this patient was more cardiac than pneumonic. Experience elsewhere is that cyanosis justifies putting the patient on the danger list, and stimulation is without results save in the heart type of case.

In milder uncomplicated cases, tincture of benzoin inhalations are grateful and seem to help. We follow these principles: rest in bed, force fluids, keep the patient comfortable, if possible, without morphine, if he has any chance at all of getting well. Get as much sleep as possible for the patient by using phenacetin for pains or headache. Give veronal or trional in some cases. Hyoscin or scopolamin, 1-100 gr. sc. if delirious, works well in most cases; if necessary combine with morphine, gr. 1/6 to 1/10, and repeat the dose in 3 to 4 hours.

The pneumonias get better, usually by lysis of the fever through 3 days to 10 days, and coming on from 3 to 10 days from onset of pneumonia. Some of them seem to be well on the

road to recovery and then die suddenly, apparently from the heart muscle failure, sometimes even when on digitalis. We have had one empyema case so far and no lung abscesses.

In our own help (nurses, etc.) no recurrence of the disease has taken place. As a rule, the patients feel achy and easily tired for several days after getting up and about. Most of the more severely sick patients lose considerable weight, and there seems to be quite a tendency to actual muscle weakness. The autopsies have shown more or less fatty change in the heart and liver. Also a common finding is hemorrhages in the recti abdominis muscles, sometimes also in the pectorals, but never in the psoas or large muscles of the back. I suppose the answer to the location of these hemorrhages is that it occurs in muscles most used during illness. The coughing of the patients almost always gives them considerable pain in the abdominal muscles.

Practically all of the four-year medical students have been taken by the State Board of Health and placed throughout the state in small temporary hospitals or barracks. Many of the men have charge of upwards of 15 to 20 up to 75 beds. Of course the treatment is practically nothing, since all available medical supplies, especially digitalis, subcutaneous and intravenous, as well as mouth preparations, can scarcely be had. Nursing care is necessarily crude also, since in the epidemic nobody has any more claim on nursing than the next one.

The mortality figures from Camp Devens and the Navy stations show about 3 to 5 per cent mortality among all cases. The figures for pneumonia run 35 to 45 per cent of the cases. The civilian pneumonia runs higher than this, very likely due to the fact that usually the whole household is sick at about the same time. Infants do not seem to be very susceptible. Children have it, but apparently their mortality-rate is lower than in adults, probably due to the fact that they go to bed early and stay there until convalescence is well under way, while adults stay up longer and get up earlier. We have had a few patients who seemed to be doing fairly well and who suddenly showed heart-muscle failure, and died within a few minutes.

The doctors and nurses wear thick gauze masks (10 to 20 thicknesses) tied over the mouth and nose; also some sort of head covering as a gauze or cloth cap. Gowns are worn on all occasions when in contact with patients. Masks

are changed often and not used again unless washed or sterilized. On leaving the wards the hands and face are washed. Gargles and sprays are usually of no use in prophylaxis. I think that the use of a gauze mask, etc., lessens the chance of infection through droplets, but if one is susceptible he still stands a fair chance of getting it.

Early in the epidemic a good many nurses and doctors were sick, and a few died. This was probably due to the fact that their precautions were not adequate, and they put in long hours of work and short ones in sleep. Most doctors now work 12 to 14 hours a day, and go home and unhook the telephone receiver until next morning.

SELECTIVE DRAFT REGULATIONS AND MEDICAL ADVISORY BOARDS*

By F. A. SPAFFORD, M. D.

Lieutenant, M. R. C.

FLANDREAU, SOUTH DAKOTA.

Never in the history of the world has such an important document been issued from a public press as the "Selective Service Regulations," which were prescribed by the President of the United States under the authority vested in him by the terms of the Selective Service Law and approved by Congress May 18, 1917.

Our President, Woodrow Wilson, the most influential man in the world today, in the "Foreword" of this remarkable document said:

The task of selecting and mobilizing the first contingent of the National Army is nearing completion. The expedition and accuracy of its accomplishment were a most gratifying demonstration of the efficiency of our democratic institutions. The swiftness with which the machinery for its execution had to be assembled, however, left room for adjustment and improvement. New regulations putting these improvements into effect are, therefore, being published today. There is no change in the essential obligation of men subject to selection. The first draft must stand unaffected by the provisions of the new regulations. They can be given no retroactive effect. The time has come for a more perfect organization of our man power. The selective principle must be carried to its logical conclusions. We must make a complete inventory of the qualifications of all registrants in order to determine, as to each man not already selected for duty with the colors, the place in the military, industrial or agricultural ranks of the nation in which his experience and training can best be made to serve the common good. This project involves an inquiry by the Selection Boards into the domestic, industrial and educational qualifications of nearly ten million men.

In regard to our own profession, he says:

I ask the doctors of the country to identify themselves with the Medical Advisory Boards which are to be constituted in the various districts throughout the

United States for the purpose of making a systematic physical examination of the registrants.

These Selective Draft Regulations inaugurated by the President constitute one of the greatest war measures ever called into operation by any nation at any time. Here was a law which placed the man working at home in some agricultural or other essential activity upon the same level or basis as the soldier himself in the firing-lines.

The other night I happened upon the *Atlantic Monthly* of March. An article by Mr. Ohlinger, of Toledo, Ohio, is so apropos of what has been accomplished in the United States during the past year in raising a National Army I am going to quote him at length. He states:

Had any one in the early days of 1917 predicted that in April the United States would formally be at war with Germany; that in May Congress would pass the Selective Service law; that in June nearly ten million men would be registered for service pursuant to the President's proclamation; that in July the order in which they were to appear for examination would be determined; that in August the first quotas would be ready to report; that in September they would begin to arrive at the cantonments; and that by October the training would be well under way—had any one in those early days of uncertainty and indecision possessed the temerity to suggest even the possibility of these achievements, his predictions would have attracted attention only on account of the seeming improbability of their realization. Never did a nation abandon more suddenly and completely its dreams of peace and neutrality and turn to the arts of war.

Even more noteworthy are these results when account is taken of the means by which they were accomplished. Recorded experience would have required a complicated system in some departmental bureau to work out the infinite details of the undertaking. But in this case precedent was thrown aside, and the intelligence and capacity for co-operation of the private

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

citizen were intrusted with the task of providing the recruits for a great army. The draft law of 1863 was administered by a bureau of the War Department and by district boards of enrollment presided over by provost marshals who had the rank and pay of captains of cavalry. The roster of the National Army of 1917 was prepared by civilians, for the law expressly enjoined that the boards charged with the selection of the men should be composed of members "none of whom shall be connected with the military establishment."

The enormous volume of work involved in enrolling those subject to the law, in giving them cards of registration, in preparing the lists and numbering the names of registrants preparatory to the drawing, in the physical examination of those called up for service, and in hearing and passing on claims for exemption and discharge, was performed almost entirely without compensation. Well might Provost Marshal General Crowder exclaim that "no great national project was ever attempted with so complete a reliance upon the voluntary co-operation of citizens for its execution." Democracy had stood the test, and for the time being had earned its right to survive. The voluntary co-operation of free citizens had proved as efficient as any administrative machine devised and imposed by an autocratic government.

The greatest war measure ever instituted in any nation in time of war, as I have stated before, was this Selective Draft, inaugurated by the President and successfully carried out by Provost Marshal General Crowder with the assistance of the war governors of the United States and their adjutant generals. Both these gentlemen in our state are with us today, showing their appreciation of the service of our profession. No one living quietly at home, enjoying the blessings of a peace-loving democracy, can realize the multiplicity of activities which have been called into service to prepare a nation for war, especially with one of the most efficient nations on earth, which has deliberately planned for more than forty years the eventual conquest of the world. What wonderful results have been brought about in the United States and in what a remarkably short time!

Future generations will stand amazed at the work done by this generation in opposing the autocracy and kaiserism of the Central Allies which have deliberately torn into pieces as mere scraps of paper the most sacred obligations and treaties of civilized nations to which they had pledged their sacred honor as signators, merely to satisfy the over-weening ambitions of an imperial paranoiac. Nero fiddling over burning Rome was a country Jake playing the Arkansas Traveller at a country dance as compared with the devilish glee of the Deutscher Kaiser as his soldiers have been urged to emulate the example of Attila, the Hun, in their campaign of fright-

fulness against the women and children of fair France and Belgium.

It became evident as a result of the experience of the first draft that it would be necessary to provide some modified measures, in order that so many men should not be obliged to go to cantonments and military camps only to be sent back by the military medical examiners at the other end, thus putting the Government and the registrant to a great deal of inconvenience, not to say unnecessary expense.

In view of these facts there was provided a number of Medical Advisory Boards in the various states of the Union which should pass upon doubtful cases and also conserve the man-power of the nation by a careful classification of the various registrants who might be examined by the Local Exemption Boards. In the first examinations a man was either accepted or rejected. There was practically no intermediate stage where use might be made of men who, though not available for active military service, might be able to serve their country "doing their bit" in more or less of the military activities where men might be used not absolutely physically fit. In this way the enormous wastage of man-power would be practically stopped.

With this end in view, the country was divided into Medical Advisory Districts and Boards of greater or less size were appointed by the governors of the different states upon the recommendation of the Medical Aides of the Governors and upon confirmation of the Provost Marshal General's office at Washington.

These medical men have done this work of further examination well, often at a great expense of time and money, but it will not be known until these registrants are called to camp what great good has come from the work of the Advisory Boards. Nearly every man with whom I have come in contact has done his work in a whole-hearted and effective manner, notwithstanding the fact that they have received nothing from the Government for their services.

Under recent instructions a large part of the burden of the examinations has been thrown upon the Advisory Boards.

About the middle of November, I received a telegram from Washington, asking if I would accept a commission in the M. R. C. for special work, my age and physical disabilities being waived. I thought it no more than right that I should do what I could in the service of my country, and wired: "I will do what I can." Three days later I was commissioned, and on the

following day I was assigned to active duty and ordered to report to the Surgeon General's Office at Washington for instructions. After two days I was ordered to report to Governor Norbeck as Military Aide to his office, and arrange for the districting of the state for the appointment of Medical Advisory Boards. I asked the Governor to invite our genial secretary, Dr. Alway, and Dr. Park B. Jenkins, Secretary of the State Board of Health, to come to Pierre to assist in this work. We made a medical survey of the state so far as military activities were concerned. This list comprised the members of the Local Exemption Boards, all physicians who had been recommended for commissions in the Medical Reserve Corps and might be called to active service. From the balance we selected the names to be recommended for the Medical Advisory Boards.

We divided the state into 27 districts, as shown by the map, afterwards increased to 28. Some of these districts resembled the famous shoe-string district of Mississippi in the old political days of gerrymandering, but this was unavoidable.

We recommended to the Governor for his approval the names of the physicians constituting the membership of the Boards, all of whom were approved by him and afterwards confirmed by the Provost Marshal General.

With a very few exceptions, the physicians all accepted the commissions, and took the oath of office.

Some of the Boards have labored under many disadvantages, being seriously handicapped in their work, owing to the sparsely settled districts and the exceedingly poor avenues of communication. This is especially true west of the Missouri. Notwithstanding all this, good work has been done, and South Dakota, I hope, will continue to hold her high place among the states of the Union.

I wish to take this opportunity of thanking the members of the Boards throughout the state for their uniformly courteous treatment, and I wish to personally thank Governor Norbeck and Adjutant General Morris and Secretary Sellers for their assistance in furthering the work of the Advisory Boards of South Dakota.

I will now call your attention to the charts which I have had prepared. They will graphically depict the results obtained. (Charts were shown.) These charts show the total number of registrants referred to each Advisory Board, the total number qualified by each Board, the total number disqualified, the total number qualified for

special service, and the total number placed in the remediable "Group B." An examination of the results obtained will be very interesting.

It gives me pleasure to add that all of the Boards responded promptly to my requests except three, and these were received too late to be charted.

STOCK FOR SALE

Ten shares of common and 10 shares of preferred Standard Medical Supply Company stock for \$900 cash if taken at once. Address 143, care of this office.

OFFICE FOR RENT AND EQUIPMENT FOR SALE

Suite of four rooms. X-ray machine, etc. Will go into army. Practice of about \$6,000 per year. Town of 20,000. Address 142, care of this office.

PHYSICIAN WANTED

To take charge of the medical department of a successful sulphur springs and mud bath sanitarium near the Twin Cities. Good salary. Give full account of yourself. Address 153, care of this office.

PRACTICE FOR SALE

A \$12,000 cash practice is offered for sale. In rich farming community, and no opposition; 65 miles from the Twin Cities; established twelve years, and books will show the exact business done. Must be taken at once. Address 149, care of this office.

LOCUM TENENS WANTED

A man to take charge of my practice for four weeks beginning October 20th. General practice, obstetrics, and surgery. Will furnish a man office, light, and fuel, and give him all he can make. Am taking in \$500 a month in cash. Address 152, care of this office.

PRACTICE FOR SALE

A \$7,000 practice for the cost of the office equipment, except books and instruments. Real estate, optional. Modern village of 1,500 in central Minnesota, in fine dairy section. First-grade high school. Man must be capable. Terms to suit. Expect to go into Army. Address 151, care of this office.

PRACTICE FOR SALE

In a town of 5,000, only a few minutes' ride from Minneapolis. Collections will exceed \$10,000 cash this year. A suite of fine steam heated offices with exceptionally fine equipment; large territory. An opportunity of a life-time for a man who is willing to work. Can be had for the price of the equipment only. Address 150, care of this office.

LOCUM TENENS OR ASSISTANT WANTED

In a 16-bed hospital in the county seat in a rich farming community of Southern Minnesota. Must be able to do some major surgery; refraction desirable.

One partner is in the M. R. C. and the other will enter the service soon. Good opportunity for the right man. Preference given to man discharged from service for physical inability, if able to do the work. Address 148, care of this office.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
H. J. ROWE, M. D. - - - Casselton, N. D.
H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

OCTOBER 15, 1918

THE INFLUENZA SITUATION

Since the last issue of THE JOURNAL-LANCET, the influenza epidemic in Minnesota has assumed larger proportions. Evidently the scourge is reaching over the country in irregular lines, and only the small isolated places escape it. From accounts in the newspapers the situation seems to be improving in the East, and the probabilities are that it will have run its course before many weeks. This does not mean, however, that it will cease after the usual time-limit of eight weeks. In all probability in the larger cities, the schools and other assemblies will develop cases because the rigidity of self-emphasized quarantine is relaxed.

Minneapolis is planning to make the City Hospital an Influenza Hospital for the time being, and the other hospitals throughout the city are endeavoring to take care of a number of City Hospital patients in order that more beds shall be available in the City Hospital for the graver types of influenza. The usual number of cases of pneumonia have been present in Minneapolis, as well as in other cities, and at the present writing the death-rate has not been high.

In order to fully realize the situation in the East, the reader is referred to a letter from Dr. W. R. King, of the Peter Bent Brigham Hospital in Boston, published on another page. Dr. King is a resident physician in that well-known hospital, and sent to Dr. J. Warren Little this very

graphic account, which covers the many phases of this sudden invasion of influenza.

The practitioners of Minneapolis have been loathe to give opiates in the average case of influenza. It has been found that many patients become cyanosed from even small doses of morphine. They seem to do better under phenacetine, which relaxes the peripheral vessels, reduces temperature, and promotes perspiration. Elimination through the skin and bowels has been beneficial in the majority of these cases. The bulletins of the Public Health Service at Washington and those of the Minnesota Public Health Association suggest the use of aspirin, not exclusively perhaps, but this drug is especially mentioned.

The United States Public Health Service has issued bulletins on "Epidemic Influenza," also called "Three-Day Fever," and, for short, "The Flu." These bulletins are issued in order to emphasize the necessity of watchfulness and care, and to encourage people to use some precautionary measures.

It is interesting to note in Supplement No. 33, issued by Surgeon General Rupert Blue, that this present, so-called "Spanish Influenza" is nothing more or less than an epidemic of influenza. This outbreak evidently corresponds very closely to other outbreaks which have occurred in the past centuries; even back as far as the time of Hippocrates and Livius. An epidemic is referred to in 412 B. C., which is considered by many to have been influenza. Similar epidemics were recorded in the 12th, 13th, 14th, 15th, and 16th centuries, and also in the 17th, 18th, and 19th. After the pandemic of 1847 and 1848 there appears to have been a considerable pause before the pandemic of 1889 and 1890. From that time on the disease has re-occurred at frequent intervals, only a few years intervening between the outbreaks.

This epidemic is like all others, in that it presents a variety of symptoms and types of disease. It sometimes comes on with great suddenness, with death resulting in a few hours. At other times the symptoms are those of a cold, a common infection, which affects the mucous membranes of the nose, throat, and bronchia. The most important general symptoms are fever, muscular pains, great tire, and common bronchial coughs. Then, again, the disease comes on more insidiously as a coryza or bronchitis, which seems to improve in a few days, only to re-occur and present graver types. The exhaustion which follows these types continues for many

days, and the patient makes very slow recovery. Bacteriologists who have studied the influenza epidemics of the past, have found that many of the cases come from a small rod-shaped germ, called, after its discoverer, "Pfeiffer's bacillus." In similar cases are found the pneumococci of lobar pneumonia; and still others have been called streptococci.

It hardly seems necessary again to call attention to the fact that the epidemic spreads from person to person, the germs being carried with the air along with small droplets of mucus expelled by coughing, sneezing, or forceful talking, consequently we are warned that no one should cough, or spit, or sneeze except in a handkerchief of gauze or a piece of cheese-cloth. All discharges should be carefully collected immediately and burned, and the members of the family who are attending the sick should be cautious to wear a small fold of gauze over the nose and mouth.

Unfortunately, like many other communicable diseases, one attack does not immunize the patient against another. It is quite likely if the epidemic becomes more general, that schools, churches, theaters, and all other assembly halls will be closed during the period of the epidemic, for the reason, mainly, that some foolish person who has not recovered will intrude himself in the crowd of people, and spread the disease by his indecent coughing and sneezing without being properly protected. It is not known yet whether this is a really necessary procedure, and it is questionable whether it would do the amount of good that is expected.

One wonders what the Christian Scientists do in cases of an epidemic. We are told that the average, presumably intelligent, Christian Scientist follows the suggestions of health boards, and keeps away from crowds and individuals who are infected, but we also know that there are many who are not so intelligent and who believe that there is no such thing as disease. Such people are criminally careless in their negligence and in lack of protection of others.

THE NEW DRAFT

For the next three months, the Local and Medical Advisory Boards will be swamped with new registrants, and it means that the same care will be exercised by both boards in the selection of those for military service. So far the examinations show a large percentage of able-bodied men who present themselves cheerfully and willingly and are anxious to get into service.

Some of the rules which formerly guided these boards have been radically changed, and it is often difficult to keep up with the changes from week to week. In the first draft, the registrant was permitted to apply to the Medical Advisory Board for re-examination, but the present order of the day is that this rule does not obtain; consequently it is quite likely that a great many of the men who go before the Local Board will be passed with one or more defects that might have been corrected by the Advisory Boards. Doubtless, more men will be sent into service who are wholly unfit, but these, of course, will be weeded out at the camps.

For instance, two registrants recently came before the Medical Advisory Board in Minneapolis. One showed a very marked scoliosis. His spinal curvature was so great that it threw his pelvis out of line, and made it impossible for him to wear a uniform which would be presentable at military inspection. This man was evidently considered quite able to perform the functions of the soldier; but, after he had been in camp a few weeks, it was found that he was unable to stand the strain, or to fit himself in other ways for service of a general character. He might be useful in the Limited Service; but, because of his scoliosis, he was honorably discharged. He returned, and was then sent up for re-examination. Another man had a remnant of some infantile disease, which produced atrophy of his left arm and rendered him unfit for active work. He would have done very well as a clerk or in some minor service; but he, too, was discharged, returned, and re-ordered for examination. All this costs a good deal of money and evidently a good deal of embarrassment to the Government, for the man has no redress except that he is sent up again for examination, and, in most instances, is likely disqualified for any service whatever.

CORRESPONDENCE

BISMARCK'S DEATH-RATE—AN EXPLANATION

TO THE EDITOR:

In the issue of THE JOURNAL-LANCET for September 1, 1918, appeared an editorial entitled "Lowering the Death-Rate." In this article Bismarck and its population are severely criticized for the apparently high mortality-rate the city showed during the year 1917. Either the writer

of this editorial was not correctly informed or the informant willfully misrepresented the existing conditions. It is true that Bismarck's death-rate amounted to 177 during the year in question, and when one figures the percentage on a basis of 8,000 population the result will be approximately 22.2 per 1,000 population. But no mention is made of our two hospitals which admit several thousand patients a year and in which the death-rate is several times that of the City of Bismarck proper, and no one would think of imposing the death-rate of the hospitals upon a city, yet that is exactly what has been done. Why was no mention made in your editorial of these facts which are so essential in compiling the mortality records? In justice to the population of Bismarck and the physicians, the writer requests that this letter be published in the next issue of THE JOURNAL-LANCET in order to vindicate those "who tolerate a condition that is harmful and, to some extent, disgraceful."

The population of Bismarck is estimated at about 8,000. During the year 1917 there were 177 deaths of which 56 were local deaths, that is, among the population of Bismarck, or 7 per 1,000 of population. Of these 56 cases, 8 were accidental and 2 occurred in patients who had been operated on somewhere else and were sent to Bismarck to die. Eleven occurred in children of three years and under, or 1.27 per 1,000 population. Compare this infant mortality rate with that of any other city in the state or even in the United States, and you will find very few to equal it.

Causes of death in 11 children are as follows:

Premature births	3
Still-births	1
Pneumonia	2
Malnutrition	1
Accidental burn	1
Pemphigus neonatorum	1
Meningitis following infection of cord	1
Ileocolitis	1

Exclusive of the 11 children, the average age at death was 49.8 years.

We have in Bismarck two hospitals with a capacity of 275 beds, and these hospitals admitted during the year 1917 4,388 patients, mainly from North Dakota, South Dakota and Montana. Of these 4,388 admitted, 121 died or about 27.5 per 1,000 admissions. Of these patients 20 died in less than 48 hours after being admitted. Of the 121 deaths occurring in the hospitals, 11 were children of three years and under.

The causes of death of the hospital patients were as follows:

Cardio-vascular-renal disease	15
Tuberculosis (all forms)	9
Pneumonia and empyema	8
Acute gangrenous appendicitis and peritonitis	7
Cerebral apoplexy and embolism	6
Carcinoma and sarcoma	5
Empyema of gall-bladder and cholangitis...	5
Meningitis	5
Accidental	4
Eclampsia and p. p. hemorrhage	4
Typhoid fever and perforation	3
All other causes	50

From the above statistics it will be seen that the mortality-rate of Bismarck compares very favorably with that of any other city in the state and that it will not be necessary, at least for some time, to call upon the "State Council of Defense to interfere and save the man-power of the nation."

Yours very truly,

W. H. BODENSTAB, M. D.

Bismarck, N. D., October 10, 1918.

ANSWER

Our editorial clearly cited the source of our information, which was the report of the Committee on Public Health made, through its chairman, Dr. C. J. McGurran, to the North Dakota State Medical Association at its recent annual meeting. This report was published in our issue of August 15, and why Dr. Bodenstab did not refer to it is beyond our comprehension.

We stated that the variation in the number of deaths in the five largest cities of the state, covering a period of five years, "showed a remarkable and inexplicable variation," and further said that "no doubt, there is some explanation for a part of the abnormal variation; but, in the main, the difference is due to living conditions, that is, to controllable causes."

As Minot showed, in the five-year period, an increase of 50 per cent; Bismarck an increase of 71 per cent; Fargo, Jamestown, and Grand Forks, decreases of 21, 0.2, and 23 per cent, respectively, the hospital explanation hardly explains the situation, for the other towns have hospitals.

We hope Dr. Bodenstab will deal fully with the figures in the report made before the Association, and find an explanation for the discrepancies named above.

The editor of THE JOURNAL-LANCET can

hardly be accused of not being "correctly informed" in this case, and the statement in the editorial of the source of the information should have made the charge impossible.

—THE EDITOR.

MISCELLANY

"SPANISH INFLUENZA"—"THREE-DAY FEVER" "THE FLU"

BY RUPERT BLUE, SURGEON GENERAL OF THE UNITED STATES PUBLIC HEALTH SERVICE

What is Spanish influenza? Is it something new? Does it come from Spain?

The disease now occurring in this country and called "Spanish influenza" resembles a very contagious kind of "cold" accompanied by fever, pains in the head, eyes, ears, back or other parts of the body, and a feeling of severe sickness. In most of the cases the symptoms disappear after three or four days, the patient then rapidly recovering; some of the patients, however, develop pneumonia, or inflammation of the ear, or meningitis, and many of these complicated cases die. Whether this so-called "Spanish" influenza is identical with the epidemics of influenza of earlier years is not yet known.

Epidemics of influenza have visited this country since 1647. It is interesting to know that this first epidemic was brought here from Valencia, Spain. Since that time there have been numerous epidemics of the disease. In 1889 and 1890 an epidemic of influenza, starting somewhere in the Orient, spread first to Russia, and thence over practically the entire civilized world. Three years later there was another flare-up of the disease. Both times the epidemic spread widely over the United States.

Although the present epidemic is called "Spanish influenza," there is no reason to believe that it originated in Spain. Some writers who have studied the question believe that the epidemic came from the Orient and they called attention to the fact that the Germans mention the disease as occurring along the eastern front in the summer and fall of 1917.

How can "Spanish influenza" be recognized?

There is as yet no certain way in which a single case of "Spanish influenza" can be recognized; on the other hand, recognition is easy where there is a group of cases. In contrast to the outbreaks of ordinary coughs and colds, which usually occur in the cold months, epidemics of influenza may occur at any season of the year; thus the present epidemic raged most intensely in Europe in May, June, and July. Moreover, in the case of ordinary colds, the general symptoms (fever, pain, depression) are by no means as severe or as sudden in their onset as they are in influenza. Finally, ordinary colds do not spread through the community so rapidly or so extensively as does influenza.

In most cases a person taken sick with influenza feels sick rather suddenly. He feels weak, has pains in the eyes, ears, head or back, and may be sore all over. Many patients feel dizzy, some vomit. Most of the

patients complain of feeling chilly, and with this comes a fever in which the temperature rises to 100° to 104°. In most cases the pulse remains relatively slow.

In appearance one is struck by the fact that the patient looks sick. His eyes and the inner side of his eyelids may be slightly "bloodshot," or "congested," as the doctors say. There may be running from the nose, or there may be some cough. These signs of a cold may not be marked; nevertheless the patient looks and feels very sick.

In addition to the appearance and the symptoms as already described, examination of the patient's blood may aid the physician in recognizing "Spanish influenza," for it has been found that in this disease the number of white corpuscles shows little or no increase above the normal. It is possible that the laboratory investigations now being made through the National Research Council and the United States Hygienic Laboratory will furnish a more certain way in which individual cases of this disease can be recognized.

What is the course of the disease? Do people die of it?

Ordinarily, the fever lasts from three to four days and the patient recovers. But while the proportion of deaths in the present epidemic has generally been low, in some places the outbreak has been severe and deaths have been numerous. When death occurs it is usually the result of a complication.

What causes the disease and how is it spread?

Bacteriologists who have studied influenza epidemics in the past have found in many of the cases a very small rod-shaped germ called, after its discoverer, Pfeiffer's bacillus. In other cases of apparently the same kind of disease there were found pneumococci, the germs of lobar pneumonia. Still others have been caused by streptococci, and by other germs with long names.

No matter what particular kind of germ causes the epidemic, it is now believed that influenza is always spread from person to person, the germs being carried with the air along with the very small droplets of mucus, expelled by coughing or sneezing, forceful talking, and the like by one who already has the germs of the disease. They may also be carried about in the air in the form of dust coming from dried mucus, from coughing and sneezing, or from careless people who spit on the floor and on the sidewalk. As in most other catching diseases, a person who has only a mild attack of the disease himself may give a very severe attack to others.

What should be done by those who catch the disease?

It is very important that every person who becomes sick with influenza should go home at once and go to bed. This will help keep away dangerous complications and will, at the same time, keep the patient from scattering the disease far and wide. It is highly desirable that no one be allowed to sleep in the same room with the patient. In fact, no one but the nurse should be allowed in the room.

If there is cough and sputum or running of the eyes and nose, care should be taken that all such discharges are collected on bits of gauze or rag or paper napkins and burned. If the patient complains of fever and headache, he should be given water to drink, a cold compress to the forehead, and a light sponge. Only

such medicine should be given as is prescribed by the doctor. It is foolish to ask the druggist to prescribe and may be dangerous to take the so-called "safe, sure, and harmless" remedies advertised by patent-medicine manufacturers.

If the patient is so situated that he can be attended only by some one who must also look after others in the family, it is advisable that such attendant wear a wrapper, apron, or gown over the ordinary house clothes while in the sick room, and slip this off when leaving to look after the others.

Nurses and attendants will do well to guard against breathing in dangerous disease germs by wearing a simple fold of gauze or mask while near the patient.

Will a person who has had influenza before catch the disease again?

It is well known that an attack of measles or scarlet fever or smallpox usually protects a person against another attack of the same disease. This appears not to be true of "Spanish influenza." According to newspaper reports the King of Spain suffered an attack of influenza during the epidemic thirty years ago, and was again stricken during the recent outbreak in Spain.

CLASSIFICATION IN THE VOLUNTEER MEDICAL CORPS

The Council of National Defense authorizes the following:

Interest among the members of the medical profession as to how their services are to be used in the Volunteer Medical Service Corps, once they have been enrolled and have put on the badge which indicates their willingness to serve and readiness to respond to a request from the Surgeons General of the Army, Navy or Public Health Service, or from the Provost Marshal General or from the General Medical Board of the Council of National Defense, has led to the announcement by the Central Governing Board of the basic system of classification for the organization. The lines on which the classification is made were determined by the Committee on Classification of the Central Governing Board, whose report was adopted. This Classification Committee has on it representatives of the Army, Navy, Public Health Service, Council of National Defense, American Red Cross, Hospitals, Colleges, Civilian Doctors, War Industries.

A summary of these classes follows:

Class I. These will be the physicians first recommended by the Central Governing Board to apply for commissions in the Medical Reserve Corps of the Army, Reserve Force of the Navy, or for appointment in the Public Health Service. They include physicians under 55 years of age, who are without an obvious physical disability which is disqualifying, and who have not more than one dependent in addition to self; or who have an income or whose dependents have an income sufficient for the support of dependents other than that derived from the practice of their profession.

There are several exceptions provided for because of evident essential needs. Whether a physician's services are essential to his community will be established

by the Central Governing Board on recommendation of representatives of the Board appointed by it to make a survey of local conditions. Whether a physician is essential to an institution with which he may be connected will be established after conference between representatives of the Central Governing Board and representatives appointed by governing bodies of the institutions concerned. Similarly, the question of whether a doctor is essential to a health department will be established by conference between the Central Governing Board and the head of that health department. The question whether a teacher in a medical school is essential to that position will be established by the Central Governing Board and representatives of the institution. Conference between the Board and accredited representatives of industries concerned will determine whether doctors employed as industrial physicians are essential in those positions. A physician essential on his local or medical advisory board will not be disturbed.

Class II. In Class II are physicians under 55 years of age who are without an obvious physical disability which is disqualifying, and who have not more than three dependents in addition to self. These will be recommended by the Central Governing Board, when the need exists, to apply for commissions.

Exceptions in Class II are the same as in Class I.

Class III. These are physicians under 55 years of age who are without an obvious physical disability which is disqualifying, but who have more than three dependents in addition to self; and they are the physicians included among the exceptions from Classes I and II, namely those essential to communities, institutions, health departments, medical schools or industries. They will be recommended by the Central Governing Board to apply for commissions when the emergency is so great as to demand their services.

Class IV. In Class IV are the physicians who are ineligible for commissions in the Medical Reserve Corps of the Army, or Reserve Force of the Navy, but who are available for all other services. The physicians in this class include those over 55, those having an obvious physical disability which is disqualifying, and those rejected for all government services because of physical disability.

Physicians not professionally eligible for the Medical Reserve Corps of the Army or for the Reserve Force of the Navy, or for appointment in the Public Health Service, will be recorded but not admitted to the Volunteer Medical Service Corps.

Applications for enrollment in the Volunteer Medical Service Corps continue to come in from physicians from all over the country and by every mail to the headquarters at the Council of National Defense Building. These are being classified as rapidly as possible. Representative physicians from various parts of the country are assisting in the work incident to the classification.

State Executive Committees, enlarged to handle the work of the Volunteer Medical Service Corps, are perfecting the organizations in their states, and county representatives have been appointed in practically every county in the country. Group meetings are being held in many of the states, at which the State Executive Committees and county representatives are being addressed by members of the Central Governing Board of the Volunteer Medical Service Corps.

NEWS ITEMS

Dr. C. L. Dohm has moved from St. Paul to Alvina.

Dr. L. N. Klove has moved from Wanamingo to Chokio.

Dr. L. G. Guyer has moved from Granite Falls to Waseca.

Dr. D. R. Wallis has moved from Miller, S. D., to Pierre, S. D.

Dr. A. J. Kaess, of Fargo, N. D., has gone to Camp Grant, Ill.

Dr. A. E. Hillis has moved from La Moure, N. D., to Tacoma, Wash.

Dr. J. J. Walker has moved from Cavalier, N. D., to Spokane, Wash.

Dr. Alfred Dean, of Grand Forks, N. D., has removed to Negaunee, Mich.

Lieut. V. H. Sidney, of Dickinson, N. D., has been promoted to a captaincy.

Dr. M. G. Sorenson has moved from Sioux Falls, S. D., to Highmore, S. D.

Lieut. Fred Holst, of Little Falls, has been ordered to Camp Custer, Mich.

Dr. F. U. Davis, of Faribault, has been elected chairman of the Rice County Examining Board.

Dr. A. E. Johnson has moved from Isanti to Minneapolis, and is now located at 3006 Nicollet avenue.

A nurse at the University Hospital died last week, the first nurse victim of the new form of influenza.

The Northern Pacific Railroad is building an emergency hospital at Staples in the park facing the depot.

The physicians of Sioux Falls, S. D., have increased their charges from \$2.00 to \$3.00 for regular calls.

The osteopaths are making a great effort to be recognized for work in the Medical Department of the Army.

Dr. J. P. Greaves, of Kenmare, N. D., now in the service in France, has been promoted to the rank of captain.

Dr. E. B. Daugherty, of St. Paul, has received his commission as captain, and is awaiting assignment to duty.

Dr. James Farrage, of Winnebago City, has

been rejected for service three times on account of his physical condition.

The departure of Dr. O. N. Nelson, of Sanborn, who has enlisted, leaves Sanborn, a good town, without a physician.

Dr. E. E. Barrett, of Glencoe, has been appointed chairman of the committee to make a nurses' survey of the county.

Dr. H. E. Peterson has moved from Chokio to Graceville to take up the practice of Capt. C. I. Oliver, of the latter place.

Dr. Emil S. Geist, the orthopedic surgeon of Minneapolis, has resumed practice, and has offices at 704 Pillsbury building.

St. Mary's Hospital of Minneapolis, with its new and beautiful building, has been offered to the Government for military use.

Dr. A. T. Horsman, of Devils Lake, was rejected by the Fargo (N. D.) examining board because under the regulation height.

Dr. Josephine Tofte, of Pine City, will soon join her husband, Lieut. Tofte, in his work in an army hospital in Cincinnati, Ohio.

Dr. H. Hanson, of Middle River, has taken the practice of Dr. A. W. Shaleen, of Hallock, during the latter's absence in war service.

We are informed by a resident of Lamberton that that village of several hundred inhabitants has no physician and that one is much needed there.

Dr. H. H. Hanson, of Middle River, has moved to St. Vincent to take charge of the practice of Dr. A. W. Shaleen, who has entered the Medical Corps.

Dr. Albert G. Schulze has moved from Duluth to St. Paul, and has offices in the Lowry Building (suite 1009). Dr. Schulze's practice is limited to obstetrics.

Unless the army demand for nurses can be met, some form of draft may become necessary, and this is foreshadowed in recent orders from Government headquarters.

Dr. Charles Lyman Greene, of St. Paul, has been commissioned captain in the Army Medical Corps, and has been summoned to Washington for duty in the Surgeon General's office.

The digitalis grown at the University of Minnesota has become known for its high quality, and the entire supply for the next two years will go to the Surgeon General for army use.

The twelfth annual meeting of the Minne-

apolis, St. Paul & Sault Ste. Marie Railway Surgical Association will be held at the Hotel Radisson, Minneapolis, on December 3d and 4th.

The Medical School of the University of Minnesota opened on the 10th instant to students in Army Medical Training Corps, with which the Medical Enlistment Reserve Corps has been merged.

The Health Commission of Minneapolis has ordered that all the windows of the street cars on a downtown line be kept open all the time as a precaution against the spread of "Spanish influenza."

Dr. H. M. Bracken, of Minneapolis, Executive Officer of the Minnesota State Board of Health, has been appointed a member of the health and medical relief for the Government railroad administration.

Dr. Charles H. Keene, former director of hygiene in the Minneapolis public schools, who entered the Medical Corps as captain, has been commissioned major. He is at Camp Greenleaf, South Carolina.

Public and private schools, all theaters and other places of amusement, all churches and other places of assembly, in Minneapolis, were ordered closed, after October 11, on account of the epidemic of influenza.

Drs. Theodor Bratrud, W. S. Anderson, Arthur F. Bratrud, and O. N. Meland have moved from Grand Forks, N. D., to Warren (Minn.), and will do business under the firm name of Drs. Bratrud, Anderson & Bratrud.

The school visiting nurse for Nashwauk showed that village to be in a serious health condition due to over-crowding with the resultant bad housing conditions. In the absence of preventive measures, the cost may be great.

Dr. Michael Sullivan, of Adrian, has retired from practice after forty years of hard work. Dr. Sullivan practiced several years in Iowa, and came to Minnesota over a third of a century ago in genuine pioneer days. He will spend the winter in California.

Dr. Harry C. McIntosh, of St. Paul, died last week of influenza while in medical service at Camp Sherman, Ohio. Dr. McIntosh was a graduate of the Chicago College of Medicine and Surgery in the class of 1913, and had practiced in St. Paul for several years.

Dr. Edward P. Slater, who graduated from

the Medical School of the University of Minnesota in June, and who was one of the first men to take the new medical degree of M. B., died at the University Hospital last week, at the age of 25. The cause of death was "Spanish influenza."

In our last issue it was stated that Dr. C. F. McComb had moved from Duluth to Wisconsin, which, *of course*, is not true. Dr. McComb has practiced in Duluth for thirty-five years, and, equally of course, will die in the harness in Duluth. At present he is chief surgeon on the battleship *Iowa*.

The formal opening of the new building of St. Mary's Hospital of Minneapolis was omitted because of the recent death of Archbishop Ireland, and, instead, an informal inspection of the building by visitors was invited for two days. We shall give a somewhat extended notice of this very complete and practically ideal building in our next issue.

Dr. L. M. Lowe, of Glyndon, has just made an unusually extensive vacation trip by auto. With his family of four members, he travelled through North Dakota, Montana, Idaho, Utah, Wyoming, Colorado, Nebraska, Iowa, and South Dakota, with a side-trip in Yellowstone Park and the parks near Denver; and hotels were not patronized. A trailer carried a living outfit, and gave independence. The trip took two months. The doctor and his two sons will enter military service. This is a good prescription for most imaginary and many real ailments.

A venereal disease clinic for men is now being held Tuesday and Friday evenings at the Dispensary of the University of Minnesota, at 7:00 p. m. The State Board of Health, through its Division of Venereal Diseases, is financing this clinic to the extent of \$115 per month for salaries, and is providing arsphenamine where needed for the treatment of patients at this clinic. Dr. H. E. Michaelson is the attending physician. It has been agreed that the State Board of Health shall support this clinic as a demonstration for at least six months. If it proves successful, it is hoped that it may be taken over and financed in some way by the city of Minneapolis. A transfer of the evening clinic for women, which has been taking place at the Court House, to the City Hospital will take place in a short time. This proposed transfer has been delayed on account of the epidemic of Spanish influenza.

RECENT ASSIGNMENTS AND TRANSFERS OF
NORTHWESTERN MEDICAL OFFICERS

ASSIGNMENTS

Minnesota—

To Camp Grant, Ill.: Capt. Knox Bacon, St. Paul.
To Camp Dodge, Iowa: Capt. G. J. Tweedy, Winona.
To Camp Lee, Va.: Capt. E. J. Horgan, Rochester.
To Denver, Colo.: Lieut. Robinson Bosworth, St. Paul.

To Fort Oglethorpe, Ga.: Capt. W. J. Cochrane, Lake City; Lieut. T. A. Lee, Hibbing; Lieut. J. E. O'Donnell, Minneapolis; Lieut. E. S. O'Hare, Milroy; Lieut. H. D. Newkirk, Minneapolis; Lieut. Emanuel Oberg, Minneapolis.

To Fort Riley, Kas.: Capt. A. C. Tanner, Minneapolis.

To New Haven, Conn.: Lieut. Looe Baker, Minneapolis.

To Camp Dix, N. J.: Capt. F. W. Briggs, Moorhead.
To Washington, D. C.: Capt. C. L. Greene, St. Paul.

Montana—

To Camp Lewis, Wash.: Capt. J. M. Scanlan, Warm Springs; Capt. C. E. Beltzer, Washoe.

To Camp Sherman, Ohio: Lieut. H. J. McGregor, Choteau.

To Fort Omaha, Neb.: Lieut. P. A. Schulberg, Rudyard.

To Fort Riley, Kas.: Capt. J. I. Wernham, Billings; Lieut. J. D. Barrett, Billings; Lieut. F. E. Abbott, Broadview; Lieut. C. W. Bice, Great Falls; Lieut. T. J. Cockrell, Hinsdale; Capt. C. I. Titus, Great Falls; Capt. M. D. Ridle, Shelby; Lieut. J. H. Phillips, Butte; Lieut. H. L. Koehler, Circle.

To Helena: Capt. E. G. Balsum, Billings.
To the Commanding Officer of Western Department: Lieut. E. F. Ross, Harlowton.

To Fort Oglethorpe, Ga.: Lieut. C. S. Koutz, Havre; Lieut. S. E. Leard, Livingston.

North Dakota—

To Fort Oglethorpe, Ga.: Capt. W. B. Wanner, Wimbledon; Lieut. J. P. Miller, Mandan.

To Fort Riley, Kas.: Capt. D. A. Fiske, Carpio; Capt. G. A. Sarchet, New England; Lieut. J. Simon, Kintyre; Capt. J. W. Cox, Grand Forks.

South Dakota—

To Fort Oglethorpe, Ga.: Capt. W. D. Farrell, Aberdeen; Lieut. H. H. Cornforth, Hot Springs.

To Fort Riley, Kas.: Lieut. A. A. Sorenson, Aberdeen; Lieut. N. J. Nessa, Sioux Falls.

To Fort Benjamin Harrison, Ind.: Capt. W. J. Maytum, Alexandria; Lieut. L. Hare, Spearfish.

To Camp Dodge, Iowa: Capt. J. F. Garrison, Oldham.

TRANSFERS

MINNESOTA OFFICERS

Lieut. L. W. Pollock, Rochester, from Vancouver Barracks to Camp Cody, N. M.

Lieut. J. A. Dahl, Minneapolis, from Camp Grant, Ill., to Camp Crane, Pa.

Lieut. Thomas Gratzek, St. Paul, from Camp Dodge, Iowa, to Camp Custer, Mich.

Capt. J. V. Johnson, Morgan Park, from Fort Riley, Kas., to Camp Logan, Texas.

Lieut. E. A. Rumreich, Mahanomen, from Fort Riley, Kas., to Camp Logan, Texas.

Lieut. G. W. Dahlquist, Lancaster, from Fort Oglethorpe, Ga., to Camp Sevier, S. C.

Capt. K. H. Schmidt, Minneapolis, from Fort Riley, Kas., to Fort Benjamin Harrison, Ind.

Capt. M. J. Kern, St. Paul, from Fort Riley, Kas., to Fort Oglethorpe, Ga.

Major H. G. Bickford, Minneapolis, from Camp Pike, Ark., to the Panama Canal.

Col. C. H. Mayo, from Rochester to Washington, D. C.

Capt. R. I. Hubert, St. Paul, from New Haven, Conn., to Waynesville, N. C.

Lieut. W. H. Halloran, St. Paul, from Camp A. A. Humphreys to Camp Beauregard, La.

Capt. U. V. Portman, Jackson, from New York City to Camp Custer, Mich.

Lieut. B. T. Bottelfson, Halstad, from Fort Oglethorpe, Ga., to Camp Jackson, S. C.

Capt. A. F. Moynihan, Sauk Centre, from Camp Custer, Mich., to Camp Sherman, Ohio.

Lieut. G. C. Roskilly, Deer Creek, from Camp Custer, Mich., to Camp Sherman, Ohio.

Lieut. F. N. Knapp, St. Paul, from Camp Dodge, Iowa, to Camp Sherman, Ohio.

Lieut. H. Oerting, Minneapolis, from Fort Oglethorpe, Ga., to Camp Zachary Taylor, Ky.

Lieut. W. J. McKillip, Duluth, from Camp Dodge, Iowa, to Fort Douglas, Utah.

Lieut. A. W. Drew, Swanville, from Fort Oglethorpe, Ga., to Fort Douglas, Utah.

Capt. W. W. Lewis, St. Paul, from Camp Dodge, Iowa, to Fort Riley, Kas.

Lieut. J. R. Nannestad, Albert Lea, from Fort Oglethorpe, Ga., to Fort Screven, Ga.

Lieut. H. C. Bumpus, Rochester, from Fort McHenry to New Haven, Conn.

MONTANA OFFICERS

Lieut. J. L. Treacy, Helena, from Camp Kearney, Calif., to Fort Benjamin Harrison, Ind.

NORTH DAKOTA OFFICERS

Lieut. A. Peake, Grand Forks, from Fort Oglethorpe, Ga., to Camp Kearney, Calif.

Lieut. W. S. Cherry, Enderlin, from Camp Dodge, Iowa, to Fort Benjamin Harrison, Ind.

Lieut. L. F. Fisher, Grand Forks, from Fort Oglethorpe, Ga., to Camp Joseph E. Johnston, Fla.

Lieut. L. G. Dunlap, Bismarck, from Camp Zachary Taylor, Ky., to Fort Benjamin Harrison, Ind.

SOUTH DAKOTA OFFICERS

Lieut. D. D. Raber, Buffalo, from Garden City, L. I., to Camp Greene, S. C.

Capt. H. C. Parsons, Watertown, from Fort Riley, Kas., to Camp Meade, Md.

Lieut. T. J. Devereau, Aberdeen, from Camp Grant, Ill., to Camp Crane, Pa.

Lieut. S. A. Donahoe, Sioux Falls, from Camp Grant, Ill., to Camp Custer, Mich.

Capt. W. F. Keller, Sioux Falls, from Fort Oglethorpe, Ga., to Camp Grant, Ill.

Lieut. L. J. Brookman, Vermilion, from Fort Oglethorpe, Ga., to Camp Joseph E. Johnston, Fla.

Capt. E. M. Stansbury, Vermilion, from Camp Dodge, Iowa, to Fort Benjamin Harrison, Ind.

DEATHS REPORTED TO THE STATE BOARD OF HEALTH OF
MINNESOTA FOR THE MONTH OF JULY 1918

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Fueral Septicemia	Accidental Deaths
Ada	1,553	1,432	0															
Albert Lea	4,500	6,192	4	1														
Alexandria	3,912	3,001	4															
Anoka	3,769	3,972	6					1										
Austin	5,474	6,960	11															1
Barnesville	1,326	1,353	2	1														
Bemidji	2,183	5,099	3														2	
Benson	1,525	1,677	3															
Blue Earth	2,900	2,319	2															
Brainerd	1,524	8,526	5			1									1			
Breckenridge	1,282	1,840	2															
Canby	1,100	1,528	2															
Cannon Falls	1,239	1,385	1															
Chaska	2,165	2,050	2	1														
Chatfield	1,426	1,226	1														1	
Cloquet	3,074	7,031	3			1												1
Crookston	5,359	7,559	8		1						1							1
Dawson	962	1,318	1															1
Detroit	2,060	2,807	3														1	
Duluth	52,968	78,466	67	2	2	5	1										3	7
East Grand Forks	2,077	2,533	1															
Ely	2,572	3,572	4															
Eveleth	2,752	7,036	5	1														
Fairmont	3,440	2,958	3														1	1
Faribault	7,868	9,001	6														2	1
Fergus Falls	6,072	6,887	10			1											1	1
Glencoe	1,788	1,788	2															
Glenwood	1,116	2,161	0															
Granite Falls	1,454	1,454	1															
Hastings	3,811	3,983	3															
Hutchinson	2,495	2,368	3															
International Falls		1,487	1															1
Jordan	1,270	1,151	1															
Lake City	3,142	3,142	9	2	1													1
Le Sueur	1,937	1,755	0															
Little Falls	5,774	6,078	9															1
Luverne	2,223	2,540	5															1
Madison	1,336	1,811	2															
Mankato	10,559	10,365	13	2		1									1	1		1
Marshall	2,088	2,152	1															
Melrose	2,591	2,591	2															
Minneapolis	202,718	301,408	291	30	10	9	8	4	5	1	3				2	9	27	19
Montevideo	2,146	3,056	3			1												1
Montgomery	979	1,267	2															
Moorhead	3,730	4,840	6			1		1										1
Morris	1,934	1,685	2															
New Prague	1,228	1,551	1															
New Ulm	5,403	5,648	11	1														
Northfield	3,210	3,215	8														1	1
Ortonville	1,247	1,774	4														2	
Owatonna	5,561	5,658	6															1
Pipestone	2,536	2,475	1															
Red Lake Falls	1,666	1,666	1												1			
Red Wing	7,525	9,048	11															
Redwood Falls	1,661	1,666	1														1	2
Renville	1,075	1,182	2															
Rochester	6,843	7,844	51		1						1						9	3
Rushford	1,100	1,011	0															
St. Charles	1,304	1,159	2															
St. Cloud	8,663	10,600	7	1		1												1
St. James	2,102	2,102	0									1						
St. Paul	163,632	214,744	218	18	8	9		2	1		7		1		3	27	1	21
St. Peter	4,302	4,176	2															
Sauk Centre	2,154	2,154	0															
Shakopee	2,046	2,302	1															
Sleepy Eye	2,046	2,247	3			1												1
South St. Paul	2,322	4,510	3		1													
Staples	1,504	2,558	2															1
Stillwater	12,318	10,198	6			1												1
Thief River Falls	1,819	3,174	5															1
Tower	1,111	1,111	1															
Tracy	1,911	1,826	0															
Two Harbors	3,278	4,990	1															
Virginia	2,962	10,473	12	1					1									1
Wabasha	2,622	2,622	3		1												1	
Warren	1,276	1,613	2															
Waseca	3,103	3,054	2															
Waterville	1,260	1,273	2														1	
West St. Paul	1,830	2,660	1															
Willmar	3,409	4,135	6			2												
Winona	19,714	18,583	14			1	1										2	2
Winthrop	813	1,043	0															
Worthington	2,386	2,385	4														1	1

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	0															
Aitkin	1,719	1,633	0															
Akeley			0															
Appleton	1,184	1,221	1															
Belle Plaine	1,121	1,204	1															
Biwabik		1,690	1				1									1		
Bovey		1,377	0															
Browns Valley	721	1,058	0															
Buffalo	1,040	1,227	2								1					1		
Caledonia	1,175	1,372	4	1														
Cass Lake	546	2,011	0															
Chisholm		7,684	2															
Coleraine		1,613	2													1		1
Delano	967	1,031	0															
Farmington	733	1,024	1															
Fosston	864	1,055	1															
Frazee	1,000	1,645	0															
Grand Rapids	1,428	2,239	1															
Hibbing	2,481	8,832	6												3			
Jackson	1,756	1,907	2															
Janesville	1,254	1,173	1															
Kenyon	1,202	1,237	0															
Lake Crystal	1,215	1,038	0															
Litchfield	2,280	2,333	1															
Long Prairie	1,385	1,250	2															
Madelia	1,272	1,273	1															
Milaca	1,204	1,102	0															
Mountain Lake	959	1,081	0															
Nashwauk		2,080	2	1														
North Mankato	939	1,279	1													1		
North St. Paul	1,110	1,404	0															
Osakis	917	1,013	3	1														
Park Rapids	1,313	1,850	0															
Pelican Rapids	1,033	1,019	2															2
Perham	1,182	1,376	3													2		
Pine City	993	1,258	1													1		
Plainview	1,038	1,175	2													1		
Preston	1,278	1,193	0															
Princeton	1,319	1,555	0															
St. Louis Park	1,325	1,743	2													1		
Sandstone	1,189	1,818	1															
Sauk Rapids	1,391	1,745	0															
South Stillwater	1,422	1,343	0															
Springfield	1,511	1,482	2													1		1
Spring Valley	1,770	1,817	1			1												
Wadena	1,520	1,820	2	1											1			
Wells	2,017	1,755	2													1		
West Minneapolis	2,250	3,022	2													2		
Wheaton	1,132	1,300	2															1
White Bear Lake	1,288	1,505	1													1		
Windom	1,944	1,749	1													1		
Winnebago City	1,816	2,555	0															
Zumbrota	1,119	1,138	0															
STATE INSTITUTIONS																		
Anoka, Asylum			3															
Faribault, School for Blind			0															
Faribault, School for Deaf			0															
Faribault, School for Feeble Minded			5	1														
Fergus Falls, Hospital for Insane			13	3		2												
Hastings, Asylum			3															
Minneapolis, Soldiers' Home			3															
Owatonna, School for Dependents			5															
Red Wing, State Training School			0															
Rochester, Hospital for Insane			12	1														1
Sauk Centre, Home School for Girls			0															
St. Peter, Hospital for Insane			16	3		1												
St. Cloud, State Reformatory			0															
Stillwater, State Prison			0															
OTHER PARTS OF STATE			605	57	8	28	6	2	6	....	6	3	....	1	22	69	2	72
Total for state			1631	130	33	67	18	9	13	1	20	3	2	5	41	172	6	150

*No report received. REGISTRAR not doing his duty
106 stillbirths not included in above totals.



Costs 5 Cents

Per 1000 Calories

Quaker Oats yields 1,810 calories per pound. It is over twice as nutritious in calorific value as round steak.

It costs five cents per 1,000 calories. Meats, eggs, fish and fowl cost from 40 to 50 cents per 1,000 calories.

Each large package of Quaker Oats used to displace meat on a calory basis saves about \$2.

The oat comes close to a perfectly balanced food. It is one-sixth protein and very rich in minerals.

Served with milk, it supplies all needed elements in just the right proportions.

Quaker Oats

The Quaker Oats supremacy lies in its flavor. It is flaked from queen oats only—just the big, rich, flavory oats. We get but ten pounds from a bushel. Yet this extra quality costs no extra price.

The Quaker Oats Company

Chicago

PUBLISHER'S DEPARTMENT

THE FAIRVIEW HOSPITAL OF MINNEAPOLIS

One of the real home-like modern hospitals of Minneapolis is Fairview, located on the river bank with a view of surpassing beauty.

This hospital, built less than three years ago, has met, in part, a great need in our city life. Its moderate prices, its cheerful wards and beautiful rooms, and its perfect equipment have enabled it to render a real service to the city.

The management of Fairview cordially invites medical men to visit the hospital, and to send it their patients in need of hospital care.

MUDCURA SANITARIUM

Dr. H. P. Fischer, as Medical Director and promoter, has built up at Shakopee, Minn., near the Twin Cities, a sanitarium for treatment by means of sulphur mud baths that has attracted wide attention, and has given the medical profession perfect satisfaction.

Mud baths, with the usual accompanying therapeutic treatment, are known the world over; but nowhere have better results been obtained than at this well-known resort.

Dr. Fischer has the confidence of the medical profession.

THE MINNESOTA SANITARIUM

The Minnesota Sanitarium of Minneapolis occupies one of the former larger and stylish residences of the city, which is admirably adapted for the care of patients suffering from nervous and mild mental diseases, for such patients do best in a home environment.

This institution is under the care of Dr. Leo M. Crafts, the well-known specialist in nervous and mental diseases, and Dr. Julius Johnson, a man of high standing in medical circles.

Our readers will find this institution thoroughly reliable.

KNUCKLIT GLOVES

Notwithstanding the high price of rubber, the Lincoln Rubber Company has not let the high quality of their rubber gloves deteriorate one particle, for they realize that the "surgical eye" at the tip of the index-finger must not be blinded or even dimmed by the infection-proof covering now used by all surgeons on their hands in all operations.

The "Knucklfit Gloves" have made a reputation that is worth while, and it is a reputation for perfection in quality.

Messrs. Noyes Bros. & Cutler are the Northwestern agents of this company.

LAVORIS

Lavoris is "purifying, stimulating, healing, and astringent," and it possesses these qualities because its chief ingredients are zinc chloride, formalin, oil of cassia, and oil of caryophyll.

Lavoris combines these well-known therapeutic agents in such a way as to produce an exceedingly pleasant preparation for use on all mucous membranes. It is now being extensively used as prophylactic against the prevailing influenza, and its composition readily shows its value for such use.

Lavoris has been on the market about twenty years,

and is one of the prominent successes in medicine and dentistry.

EYE-SIGHT TESTS

Mr. K. J. Knapp, the Minneapolis member of Kindy-Knapp, Inc., is well known to all of our Minneapolis and to many of our outside readers as a man who is thoroughly dependable in his line of work as a registered optometrist. He offers his services to medical men in eye-tests and prescriptions, and all cases referred to him will be dealt with in a manner that no physician can find fault with.

He is worthy of entire confidence, and THE JOURNAL-LANCET bespeaks for him the patronage of the medical profession.

His new place of business is 719 Nicollet Ave., Minneapolis.

APOTHESINE OR COCAINE?

There are many indications that apothesine is gradually superseding cocaine as a local anesthetic. This is not said in depreciation of the last-mentioned drug, the merits of which are well understood. It must be remembered, however, that cocaine possesses some grave defects. Prominent among these is its toxicity. Furthermore, unrestricted use of the product leads ultimately to the formation of the cocaine "habit." Apothesine, while as efficient as cocaine, has been shown by comparative tests to be far less toxic than the latter. Moreover, it is not subject to the narcotic law, and its use does not eventuate in habit-formation. Apothesine produces such complete anesthesia that even major operations are performed under its influence, quite as successfully as under cocaine—a fact that further emphasizes the importance of its discovery.

THE ST. JAMES SANATORIUM AND HOSPITAL

Dr. G. M. Lisor, of the Elgin State Hospital, Elgin, Illinois, has accepted the position of superintendent and will have entire charge of the medical and nursing work of the St. James Hospital. Dr. Lisor has had several years' experience in the State Hospitals of Minnesota and Illinois in the care of patients suffering from nervous and mental diseases. His entire time will be devoted to the interests of the St. James Hospital, and under his direction the modern methods of treating mental diseases will be installed.

A training-school for nurses will be started this month, and it is planned to have it on the accredited list of nurses' training-schools.

A laboratory is to be installed, and the ordinary urine and blood examinations will be done for the physicians of St. James and surrounding towns.

The Hospital is prepared to receive surgical, medical, maternity, and nervous and mental cases. The capacity of the institution at this time is 79 patients. Many of the rooms have private bath-rooms.

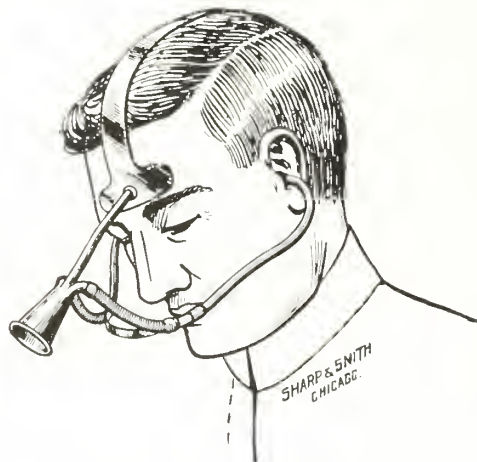
STILL ROCK SPA

The above-named institution is a 100-bed hospital devoted exclusively to the treatment of diabetes and Bright's disease, and is beautifully located at Waukesha, Wis., which has become a health resort of national reputation.

It is now universally recognized that some diseases are best treated by specialists and in institutions devoted to such treatment. Diabetes and Bright's disease are not diseases to be treated routinely. Nothing but individual and special treatment under special conditions will produce results at all satisfactory to patient or physician;

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

65 East Lake St. - - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aenaeobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.

5 S. Wabash Ave.

ST. LOUIS, MO.

4485 Olive St.—Corner Taylor

NEW YORK, N. Y.

18 E. 41st St.

and it is along these lines that Still Rock Spa does its work.

Dr. A. J. Hodgson, the medical director of the institution, feels that Still Rock Spa has accomplished work worthy the attention of every physician who has a case of either of the above diseases that he desires to put under special treatment and in the care of experts in these diseases fully equipped for the work.

THE AMPOULE IN MEDICATION

The use of the ampoule marks a decided advance in the ease and accuracy with which sterile solutions of potent drugs can be administered.

Among the manufacturing pharmaceutical houses that have done much to develop the ampoule, perfect it and increase the scope of its usefulness is Eli Lilly & Company, of Indianapolis. In fact, many physicians so closely associate the Lilly label with ampoules that they think of Lilly as the Ampoule House, notwithstanding the fact that this concern is among the leading biological, as well as pharmaceutical, producers of America.

A beautiful new line of Aseptic Metal Pocket Cases has been added to the Lilly list, and a handsome catalogue in four colors showing these items, will be sent to our readers upon request addressed to Eli Lilly & Company, Indianapolis, Ind. These cases in gold and nickel offer a compact means of carrying ampoules or hypodermatic tablets together with a syringe. The cases occupy but little space and are already becoming quite popular it is said. This is not surprising since they serve a highly useful purpose.

A SUGGESTION FOR SPANISH INFLUENZA

In view of the success obtained by Woolley, at Camp Greene, and by McCord, Friedlander, and Walker, at Camp Sherman, in preventing diseases of the upper respiratory tract, such as meningitis, measles, pneumonia, and diphtheria, by the local use of Chlorazene and Dichloramine-T solutions, it is reasonable to believe that equally good results can be obtained with the same remedies in the prevention and cure of "Spanish influenza."

The method employed at Camp Greene was to gargle or spray the throat three or four times daily with 0.25 per cent solutions of Chlorazene. The nasal pharyngeal tract was then sprayed twice a day, or more frequently, with a 2 per cent Dichloramine-T solution in Chlorcosane.

This treatment, in association with aspirin and other salicylates, and the generous use of bacterins, has much promise.

Chlorazene, Dichloramine-T, and Chlorcosane are obtainable from The Abbott Laboratories, Chicago, Illinois, which is supplying thousands of pounds of these products to the United States Army and Navy.

EPIDEMIC INFLUENZA

Messrs. Reed & Carnrick submit the following rational treatment of the prevailing epidemic. The clear indications are to promptly aid Nature in her effort of self-defense. Associated internal secretions and enzymes are the "autoprotective mechanism." Re-enforce Nature's resistance, her protective hosts, and offending, destructive hosts cannot prevail. Protonuclein, an association of internal secretions and enzymes, promptly re-enforces the defensive hosts against the attack of epidemic influenza. There is no treatment so clearly indicated in this epidemic as Protonuclein. Protonuclein increases the leucocyte count and activity. Give one to two Protonuclein tablets every four hours during

acute phase of the disease, and through convalescence until normal health has been re-established. Spray the nose, mouth, and throat with the following effective solution: Zymocide (Reed & Carnrick), one fluid ounce; aqua camphora, or salt solution, three fluid ounces. This antigermicidal solution should be used every four hours, if practicable, or morning and evening, as a protective against epidemic influenza.

KORA-KONIA

It is an easy matter to employ one of the many dusting or dressing powders offered to the medical profession as being the best for the treatment of minor wounds, abrasions, chafe, and irritation or inflammation of the skin surface.

The indications for an ideal powder for such purpose, called for antiseptic, astringent, soothing, and healing properties, are best combined in Kora-Konia.

Kora-Konia has been steadily gaining in use among the best class of physicians, because it meets every indication for a dusting or dressing powder, and because its combination has been carefully evolved, and in its manufacture only the best quality of material and the highest skill in compounding are employed.

Kora-Konia is not in any sense at all a preparation intended simply for toilet use. It was designed especially for professional use by physicians and nurses, and it is being used by numbers of these with perfect satisfaction.

Any physician who is not acquainted with Kora-Konia, or who has not yet tested it clinically, will find it for his own interest, as well as for the interests of his patients, to become acquainted with this agent which is supplied by the Gerhard Mennen Chemical Co., Newark, N. J.

EYE SIGHT TESTS

ALL cases referred to me will be re-fracted carefully and the courtesy treated in a purely ethical manner.

K. J. KNAPP

REGISTERED OPTOMETRIST

KINDY-KNAPP, Inc.

719 Nicollet Ave.

Minneapolis.

N. W. 7038—T. S. 33929

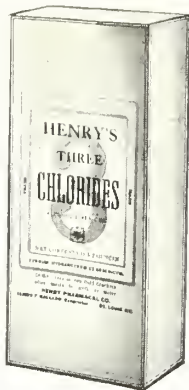
Build up a reserve fund in a Savings Account at the

**First
and
Security
National Bank**

Capital and Surplus Ten Million Dollars

Marquette Avenue at Fifth Street

We Invite You to Do Your Banking here



THREE CHLORIDES (HENRY'S) LIQUOR-FERRISENIC-12 oz. Bottles, Price \$1.50

Indicated in anemia and bodily weakness especially in the treatment of puny children, convalescing adults or the aged; also for girls at the age of puberty, women at the menopause and wasting diseases and debility.

SPECIAL NOTICE TO PHYSICIANS.

We will send an Original Bottle, \$1.50 size, *Three Chlorides*, to any Physician who will send us 30c. Express Charges on same. Send Coin, Stamps, Express or Money Order.

WRITE FOR BOOKLET

Henry Pharmacal Co., 121 Vine Street
ST. LOUIS, MO.

Be Sure You Get
The Minneapolis Milk
Co's Bottling



IT MEANS PURE MILK

Milk is the cheapest and best food on the market today, and every family can save money by using two or three times the usual amount consumed by the family. ¶ A perfectly pasteurized milk is perfectly free from all harmless germs; and no other milk should be used by either children or adults. ¶ Our milk is scientifically pasteurized at an absolutely uniform temperature as applied from day to day. Every process it goes through is an automatic process, eliminating every chance of contamination. ¶ Physicians can recommend it with certainty that it meets all their demands for purity and for uniformity in the elements that make milk an ideal food, both for the well and the sick.

METROPOLITAN MILK COMPANY

T. S. 33 377

900 SOUTH SIXTH STREET

N. W. Main 2348

100% American

THE BAYER COMPANY, Inc. is controlled by the Alien Property Custodian and the manufacture and sale of its products are entirely under the supervision of **American Officers and Directors** appointed by him.

As soon as its books have been audited and the property appraised, the capital stock of the Company will be sold by the Alien Property Custodian to **American Citizens**.

All profits as well as all the money realized from the sale of the Company will be used for the purchase of Liberty Bonds to help in the prosecution of the War until the **complete defeat of Germany**.

Therefore, genuine Bayer-Tablets and Capsules of Aspirin as well as other Bayer products can be purchased with full confidence.

THE BAYER COMPANY, Inc.
117 HUDSON STREET NEW YORK, N. Y.

THE JOURNAL-~~L~~ANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, NOVEMBER 1, 1918

No. 21

WAR SURGERY*

BY E. S. JUDD, M. D.

Mayo Clinic

ROCHESTER, MINNESOTA

Educating the physician and the surgeon in the civil life of today to become military surgeons in a comparatively short time is a tremendous task. While the principles of all types of surgery are much the same, yet there are certain special requirements and a goodly amount of special training which are necessary to make men proficient in war surgery. First, it is important that the medical officer should have had a very thorough preliminary medical training, and it is also important that he should have had a considerable amount of general experience in the practice of medicine and surgery. As a military surgeon, he becomes a military officer, and he requires a certain amount of military training. It does seem, however, that the military surgeon should not be called upon to do any more paper and detail work than is absolutely necessary. Obviously it is impossible for him to give the proper attention and treatment to his patients when he is obliged to spend most of his time making out written reports.

It is impossible for us to teach the technical points of war surgery in a practical way in this country, since it is necessary to have clinical material with which to do this teaching and, therefore, this particular training will have to be obtained by our surgeons largely after they have arrived in France. A great many of our medical officers have been in training in the French and

British armies for a long time, and it is more than likely that these men will be sent back to our army as they are needed.

A certain amount of very valuable training can be given to medical officers in our larger clinical centers. This training consists in what might be called postgraduate courses, and at the present time is being carried on to a large extent. Special courses are being given in brain surgery, fractures, orthopedics, methods of treating wounds, and in general surgery. This certainly does not mean that a man having taken one of these courses becomes a specialist in that particular branch, but it does mean that he will be given the opportunity of intensive instruction in the fundamentals underlying that branch of surgery, and, if he shows himself to be proficient, he may later be assigned to such work. It is, of course, impossible for those working in the Surgeon General's Office to know a great deal about any one person's qualifications, and these courses of instruction given to the medical officers make it possible to select and assign to them the work they are best qualified to perform. It is our endeavor in teaching to emphasize the fundamentals and the principles, and not to dwell on the special details. From the amount of interest shown by the men in our classes, at the Clinic, it seems certain that they are receiving considerable benefit from these courses, and, unquestionably, they will be better able to handle the work which will later be assigned to them.

*Presented before the South Dakota State Medical Association, Mitchell, May 21-23, 1918.

The Base Hospitals and Evacuation Hospitals which have been organized in the different training-camps are under the supervision and direction of some of the most able physicians and surgeons in the country, and the men in the camps are receiving the very best attention and care that is possible. The medical officers in the camps were obliged to organize their staffs and to get all of the equipment together. At first much of the work was done under difficulties, but matters have gradually become regulated, and at the present time most of the surgical work can be done at the camps. In spite of the fact that the surgery can be done in the training-camps, it would seem that, so far as possible, the men needing operations should be operated on in the civil hospitals before they are sent for military training. There would still be plenty of work to do in the camps in handling emergencies, and at the same time the work and expense in camp would be greatly reduced, without increasing the efforts of any one civil surgeon to any degree. A tremendous amount of work is certain to fall to military hospitals when the reconstruction begins, and by that time their organization will have been perfected and much will have been done in the development of surgery along certain lines.

At the suggestion of Dr. C. H. Mayo, efforts are being made to establish a large medical school in Paris. It has been found that buildings may be obtained for the purpose, and the teaching staff is already there working independently. In addition, there is available an unlimited amount of clinical material. A medical school of this type will be of great service just now in giving the necessary special training and instruction.

Apparently the best and most practical method of handling war surgery at the front is that adopted by the French and American armies. The front is divided into zones. The same medical officers have charge of the work throughout an entire zone, which begins at the front-line trenches, and extends back to the base hospital. The entire zone is under the direction of the same staff which has supervision of the dressing stations, the casualty clearing stations, and the base hospital. With this arrangement, cases are followed by the same group of physicians, and the results of the treatment are known to them. Up to the present time none of the injured have been kept at the dressing-stations, which are immediately behind the trenches. First-aid is rendered here, and then the injured are sent back to the evacuation hospitals. French and American medical authorities have recently been developing op-

erating mobile units. These are fully equipped and are transported on large trucks, which can be sent about wherever an attack is started. Such units would seem to be especially valuable in caring for abdominal wounds, in checking hemorrhages, and in giving transfusions.

A great deal of operating is done at the casualty clearing-stations or evacuation hospitals, which, I believe, are usually located several miles behind the lines. Patients are often kept at these stations for some time before being moved back to a base hospital. In the base hospital, some of the reconstruction work is done, though, if the finer plastic operations are indicated, patients are sent to the different special hospitals.

One of the most important things learned by the medical profession from this war thus far has been the improved methods of treating wounds. It has usually been said that all wounds under such circumstances are infected and that infection is one of the most serious factors to be contended with. In the first place, a great deal has been accomplished by prophylaxis, especially as regards tetanus, which has always been very common in other wars. Gas-infections are still common, but from the more recent reports these are being handled more satisfactorily. While there is still a good deal of discussion and some uncertainty about the value of chemical sterilization of a badly infected wound, there can be no question but that the Carrel-Dakin treatment, if applied to the wound before it becomes badly infected, is of great value. It has created a great deal of enthusiasm in regard to the treatment of wounds in general, and, while the particular agent employed may not be of great importance, the detail of the care is unquestionably very valuable. This method of treating infected wounds is beginning to find a definite place in civil surgery.

One other point emphasized by surgeons who have had a great deal of experience, is the necessity for removing all of the badly traumatized soft tissues. Reports come to us to the effect that, if this tissue is all removed soon after the injury, some of the wounds will heal primarily. Reports, none too good, are being received regarding the results of badly fractured skulls with laceration of the brain tissue. These cases are treated in the casualty clearing-station, where a great many decompressions are performed. Cerebral hernia is of common occurrence, and some good results in this condition have been obtained by reducing the intracranial pressure repeatedly by means of spinal puncture. In this

manner the hernia may eventually be reduced, and the contour of the skull re-established by grafts of bone or cartilage. Large disfiguring wounds about the face involving the bony and soft tissues have been repaired very satisfactorily. Oral and dental surgeons, oftentimes working together, have accomplished remarkable results. These operations are usually late ones, as it has not thus far seemed advisable to operate immediately in this field. The results depend on the later grafting of bone and large areas of soft tissue.

It seems fair to assume at this time that the results of the treatment of wounds of the chest will materially change our conceptions of surgery in this region. This is especially true so far as the lung is concerned. It was demonstrated by Sir Berkeley Moynihan and others that no special method of anesthesia is necessary, and that surgery of the chest can be performed under the same general principles as surgery elsewhere in the body. The striking thing about this is that the chest is first opened widely and the lung allowed to collapse. Collapse of the lung was supposed to be almost always fatal until of recent years, and it seems out of place to hear military surgeons describe the opening of the chest by a large incision, which allows of separation of the ribs without sacrificing any of them, and through this large incision delivering the collapsed lung from the chest cavity. Fragments of shrapnel or other foreign material are removed from the tissue of the lung, the bleeding points are ligated, and the lung returned to its proper place within the chest. The incision in the chest wall is completely closed to make it airtight, and in a few hours the lung has expanded and is resuming its function. This seems almost too easy, but a number of such cases have been reported by several different surgeons.

Abdominal wounds are not so common, but are attended with a high mortality. This may be reduced when the mobile unit comes into more common use so that such injuries can be attended to very shortly after they occur. The mortality in these wounds is often due to hemorrhage, which in many instances might be controlled if aseptic operating were possible soon after the wound occurred. Penetrating abdominal wounds made by rifle bullets are very deceiving. Many of these patients are brought in for dressings to clearing-stations in apparently very good condition: they are able to walk and are not in pain. If nothing is done for these patients, often within twenty-four hours, they will have developed

general peritonitis from a small leakage in the intestinal tract, and they cannot then be saved by any method. I believe that in most instances at the present time, these patients are subjected to operation at once if the wound is clearly penetrating, and that many times a perforation is found where least expected from the symptoms. Attention has been called to the fact that the distended stomach may have a perforating wound within its wall and that it should be carefully explored in all such cases. Patients having wounds of the liver usually recover unless there is too much destruction of tissue. Bleeding from these wounds is controlled by gauze packs. If it is difficult to control bleeding from the spleen, or if this organ is badly traumatized, the general opinion seems to be that splenectomy is preferable to an attempt to repair. In the treatment of wounds of the intestine, it seems much safer to repair the wound whenever possible, rather than to resect the intestine. Penetrating wounds of the intestine, unless operated on early, have given a very high mortality. Wounds of the kidneys and bladder have not been common.

Fractures, especially of the long bones, are very common, and undoubtedly many of the debated questions with regard to the method of treatment of fractures will be settled during this war. At the present time, I believe that those having the most experience are resorting to the extension-fixation treatment in preference to the open operation. It seems quite certain that the different methods of plating fractures are doomed. Much is being accomplished by splints and devices which fix the fragments of bone without fixing the joint of which the bone is a part. While this seems impossible in some cases, at the same time, where it can be accomplished, it is of the greatest importance, because as soon as the callus is firm, the man is able to be about and the disability period, which is frequently months, is greatly reduced.

Great opportunity has been offered for the study of shock, especially in the cases of fracture of the long bone, though very little definite information has been given out as to just what shock really is. Undoubtedly, in some of these fracture cases the syndrome is produced by pulmonary fat embolism, the fat entering the veins and sinuses at the point of fracture. One point regarding these patients in shock seems to have been established, and that is that a fairly accurate margin of safety as to whether or not the individual will stand surgical interference can be determined by an estimate of the diastolic blood-

pressure. If the diastolic blood-pressure is below 60 millimeters the danger of any operating is very great, while, if it is just a few points above this level, the operation may be carried on with a reasonable degree of safety. In case of a low diastolic pressure, the condition of shock must be at least partially overcome before surgery is undertaken.

In conclusion, I wish to call attention to perhaps a well-known though serious situation in the medical profession which confronts France, England, and America. The situation is this, that medical men in all of these countries are being used up by natural consequences in this war very much faster than they are being produced. The increased requirements for medical education which were established before the war

have reduced the number of men entering the medical colleges. Unless some radical changes are brought about, we shall very soon find ourselves greatly in need of medical men. I do not believe that entrance requirements should be changed; at the same time, I do believe everything possible should be done to induce young men to take up the study of medicine and surgery at this time. With the natural loss to the profession each year and the added loss from the casualties of the war, there will be many vacancies, and this at a time when medical men will be particularly needed, with the tremendous amount of reconstruction work to be done. Exceptional opportunities are certain to be offered to any young man of this generation choosing medicine or surgery as a profession.

FOCAL INFECTION IN THE MOUTH, NOSE, AND THROAT*

By A. W. MORSE, M. D.

BUTTE, MONTANA

While it is impossible to review all the literature and to give an idea of the importance of focal infection in general in a brief paper, I wish to make acknowledgment for many of the following statements taken from the current literature. The most I can expect to do is to emphasize a few points which have been impressed upon me as important in dealing with the subject.

By focal infection we mean an area of tissue infected with pathogenic organisms, and quite naturally there may be primary foci and those arising at more distant points, or secondary. The primary foci may be located anywhere in the body. They are not confined to the ear, nose, and throat by any means. One must remember that there may be a focus in the appendix, pelvis, genito-urinary system, or gastro-intestinal tract (such as gastric duodenal or intestinal ulcer, Peyer's patches), just as in the lymphoid tissue of the throat. The most frequent seats of infection are the teeth, jaws, throat, accessory sinuses, and the mastoid. There are some of the opinion that the tonsils are the most frequent seat of these autogenous conditions. I think now that the majority believe that the teeth and alveolar processes will prove themselves to be the most important and frequent seats when they are more

thoroughly understood and all the offenders found. It is quite probable that the anatomical structure causes these infections, the most virulent because their entire debris is forced into the circulation. After the teeth come the tonsils, the accessory sinuses, and the mastoid antrum, and they follow in the order named.

The significance of focal infection is this, it seems to me: We know that there are a great many people who have these foci in various parts of their bodies, and yet apparently do not suffer from them. This is because their bodies have been able to take care of a large amount of this infection without any apparent detrimental effect. Just how long this equilibrium is able to maintain itself is a matter of speculation. The fact that they are able to get along so long without apparent trouble leads many to doubt all of these harbors of infection, but, sooner or later, some of them will suffer from a secondary infection which can be definitely proven to come from a primary focus, and the unfortunate part of it is the primary focus must be eradicated before the patient will recover. Those who never seem to suffer have possibly a high degree of natural immunity from the particular organism which they harbor. However, the fact remains that normal resistance of the body to any infection is affected by several things. The lowering of the temperature, as exposure to cold, extreme

*Presented at the annual meeting of the Montana State Medical Association, held at Butte, July 10 and 11, 1918.

mental or physical exhaustion, starvation, or debility from the misuse of alcohol or drugs may very readily cause the lowering of the natural resistance of the body, and mark the setting up of a systemic infection, the source of which is present in the individual. Where focal infection exists, one always has hanging over his head the possibility of a systemic disease if he is so unfortunate as to meet with any of the above-mentioned conditions.

Time is not permitted to more than mention the names of the conditions which have been apparent to have resulted from primary focal infection: rheumatism, neuritis, arthritis, myositis, endocarditis, myocarditis, pericarditis, nephritis, leucemia, anemia, pernicious anemia, appendicitis, gastric, duodenal and intestinal ulcer, pancreatitis, myelitis, osteomyelitis, cholecystitis, septic iritis, iridocyclitis, and those indefinite conditions of malaise and debility which are so often ascribed to overwork.

The organisms which are responsible for focal infection have been worked out more carefully by Rosenow than by any one else, although there are a large number of workers who have confirmed and made possible a definite bacteriology for these conditions. While the endoamebæ have been supposed to be present in practically all conditions of pyorrhea, we do not now regard them as being most significant. We look at them more as making a good symbiosis with pathological bacteria. These have been found to be streptococcus hemolyticus, streptococcus viridans, streptococcus mucosus, and streptococcus pneumococcus. These have been determined by Rosenow to change the virulence and affection for different locations under different conditions or environment which change the amount of oxygen present and the media on which they grow. It is this possibility of change that has correlated and made acceptable the different reports of the various men working on the bacteriology of these infections.

Very often the original cause of infection is unknown to the patient, and is very difficult for the examining physician to determine. In typical cases of pyorrhea where the gums have receded from the roots of the teeth and pus is seen around them, it is self-evident that the mouth is the seat of infection. This means that innumerable numbers of bacteria are swallowed, many of them being carried on through the intestinal tract with the opportunity of lodging in any portion of the tract, as well as a large num-

ber of them being taken out and carried through the blood-stream, where they may find their lodgment in the pancreas, gall-bladder, or kidney, and the especial place that they happen to lodge is determined by an affinity for that part, as Rosenow has repeatedly demonstrated. In these cases of pyorrhea it is almost certain that there are apical abscesses, in fact a great many believe that pyorrhea nearly always starts from an apical abscess. Whether this is so or not, the fact remains that apical abscesses are practically always present in any marked case of pyorrhea, and the pus from this source is most virulent for several reasons, first, that it is growing in the place where it is deprived of its oxygen, and, secondly, because the entire amount is thrown into the circulation so that it all reaches that part of the body for which it has an affinity. Besides these cases where the trouble is evident on the most superficial examination, we find apical abscesses where there are no evidences that are easily seen. The gums may be apparently healthy, and it may be impossible to find any pus in the mouth; and yet there may be a very virulent infection at the roots of one or more of the teeth. These are the cases that are very difficult to locate, but very gratifying in the way of results when we are able to get at them.

The infection in the tonsils and its relation to rheumatism has been known for more than a century, and for a somewhat lesser time in relation to chorea and endocarditis. If one will carefully inquire into the history of the throat condition, I believe that in nearly all cases of tonsillar infection there will be some indication pointing to them as the seat of the trouble. Of course, a great many times it is possible to demonstrate in the tonsil itself pathological conditions (cysts, scars, or adhesions) which make us believe that the tonsil is the seat of infection. We should endeavor always to find some positive evidence that the tonsil is the source of the trouble, either in the history or in the tonsil itself. It is never satisfactory to attack the tonsil in a negative way. I mean by this, that possibly the patient has been sent to you by an internist with the explanation that he can find nothing to account for the condition, and consequently it must be the tonsils. In a great many cases you are able to confirm his opinion, but in others you are unable to find anything to point to the tonsil as the source of the trouble. While cases have been reported where the infection could not be found until after enucleation of the

tonsil, they are exceptionally rare. Dr. Shambaugh says, in speaking of such cases, that "he has removed tonsils which he thought normal because the internist believed he had eliminated all other sources of infection and that the tonsils were the offenders, and in no such case was the patient benefited."

The lymphoid tissue in the nasal pharynx may also be a source of infection, and in such cases it is sometimes difficult to distinguish it from pus coming from the sinuses, but we should always keep this in mind in examining the posterior nasal pharynx. Infection in the accessory sinuses is sometimes very easy to determine. This is the case when you are able to see pus; but to rule out accessory sinuses when one is unable to see pus is a much more difficult thing. It requires considerable care and patience to eliminate the trouble or find its source. The extension of the infection through the Eustachian tube very often causes a mastoid infection, which usually, however, is evidenced in such a manner that it is eliminated before it has become a source of secondary infection.

The diagnosis of the focal infection is the most important and most difficult thing you have to do in these conditions. A very careful history as to the beginning of the trouble sometimes is a material help in indicating the possible source of the primary focal infection. For instance, rheumatism, chorea, heart lesions, arthritis deformans, nephritis of the glomerular type are most apt to have their primary focus somewhere in the head, such as chronic tonsillitis, sinuses, or alveolar abscesses. With such a problem before one, one needs to call in sometimes all the assistance he is able to get. Bacteria cultures made from the urine in nephritis very often indicate the particular organism causing the infection, and similar organisms found in the original focus are strongly indicative of the relationship between the two. The x-ray plates are very useful in determining trouble in the alveolar apices. One must remember, however, that the x-ray plates are not infallible, and are often misleading, causing one to overlook an infection that might be quite important. One must look with suspicion on every tooth that is devitalized, and even if the x-ray picture seems to indicate a healthy condition, if there is other evidence of apical infection, it is better to remove the tooth than to allow it to remain in some of these serious secondary conditions.

The treatment for these conditions should begin before there is any secondary manifestation. We shall accomplish the most by educating the public to the danger of infection by impressing people with the fact that a too conservative treatment of repeated trouble may produce grave secondary infections.

For a long time we have insisted on oral prophylaxis, probably without definite conditions in our minds. There has existed too long in the minds of surgeons and physicians, as well as of dentists, the idea that the teeth served their full purpose if they were useful in masticating food. As long as there was no pain and the food was masticated, there was no question but that the teeth were performing their proper function. A badly decayed tooth was devitalized and capped with a crown which insured the retention of as much pus as possible. As long as it caused no pain, it was never suspected of being a possible source of infection. We did not imagine that they could be "pill boxes" sending their machine-gun fire of infection and toxemia into the system of their unsuspecting victim, but we know this now. The tooth that devitalizes itself is even more dangerous than one treated in this other manner. Now that we know the possible danger of these conditions, I believe the medical profession, together with the dentists, will be more reluctant to crown teeth or advise them to be crowned than they have been in the past. In a similar way, all medical men who see repeated infection of the tonsils, possibly a peritonsillar abscess once or twice, will insist upon their removal or proper care before they have become a source of secondary infection.

The lymphoid tissue in the posterior part of the pharynx will receive the attention it requires. We shall not be content to advise our patients that a cold in the head which prevents one from breathing through the nose for a considerable time, is a harmless condition. We shall advise them to re-establish the function of breathing through the nose, so that drainage will be taken care of, and thus avoid those distressing and difficult cases to handle of chronic sinus-infection as well as lessen the probability of infection extending up the Eustachian tube and involving the mastoid.

Where a secondary infection has shown itself, the primary focus, if located, should be removed if the general condition of the patient warrants it, and the primary focus is not in an inflammatory condition. If the primary focus shows an exacerbation, it should not be interfered with until it

subsides. Even where there is no evidence of trouble, it is not unusual to increase the systemic or secondary condition by the removal of the primary focus; in fact, several cases have been reported with a fatal termination when the primary focus was removed, as in a very active secondary infection, such as rheumatic fever.

The removal of the primary focus is only the beginning of the treatment. One should never be satisfied that there may not be some other source of infection. One must be constantly on the lookout for such. Everything should be done to build up the nutrition of the patient. He should have the proper food, as nourishing as possible, as indicated by the particular condition from which he is suffering. Tonics are often given, as well as outdoor air and sunshine. The mental condition of the patient is perhaps as important as the physical, and the environment should be as cheerful as possible, and all worries should be kept away. Rest is a very important part. Attention to the elimination is very important, and all of the organs of excretion should be stimulated. The skin and bowels should be kept active by proper hydrotherapy and cathartics.

I wish to report one or two cases which illustrate some of the difficulties which we are certain to encounter in many of these cases.

CASE 1.—In December, 1915, Mr. A. came to the office complaining of severe headaches which were incapacitating him. They came on first after a trip doing field-work. He also was subject to attacks of rheumatism, which made it difficult at times to use his hands or to walk. He was under the care of an internist, who treated him on the hypothesis that his trouble was due to intestinal intoxication and infection. He was dieted vigorously for several months, as well as given other appropriate treatment, but without results. Business took him to another city where he was under the care of another good man. This time he was treated for stomach trouble, which had become more prominent. He did not receive much benefit. Refraction errors had been corrected, but his symptoms persisted. Just two weeks before, he had been advised to have his tonsils removed, which he had done. The operation was complicated in some way, as he was on the table an hour and a half and when he was seen there was a sinus on one side about an inch and a half long discharging pus. He was somewhat better, and we felt that when this sinus cleared up he would be improved. The refraction was checked, and he was not seen again until three months ago, when he came in with iritis. The history between the time seen this time and the last was as follows:

He had a large number of crowns on his teeth, and finally a physician had suggested having all his teeth removed. This was done. There was little, if any, benefit. He had three or four *x*-rays taken of his jaws, all of which were interpreted for him as showing no trouble excepting that there was a small root left in

the upper jaw on the right. The *x*-ray plate was said to be clear. His trouble continued. He went to two of our largest clinics East, spending two weeks in each, where the most thorough examination was made, and every possible source of trouble looked into. He came away without having found out anything to account for the trouble. On his way home, business compelled him to stop in Miles City, Montana, and there he had an attack of the most violent toothache he ever experienced. The lower left side of his jaw was swollen, and upon examination, a fine opening was seen from which a minute amount of pus was issuing, never more than could be gotten on the head of a pin. This sinus led to the root of a tooth which none of the *x*-ray plates showed. That was removed, and he insisted also on the removal of the root above; and then improvement began, and it has since been steady.

CASE 2.—Mr. B. came in in September, 1913, with infection of the antrum. His first molar had already been removed. The antrum was opened below the lower turbinate, and the opening remained permanently. His trouble persisted to a certain extent. The second molar was then removed. A day or so later he spit out one of the roots. He was not seen again until May of this year, when he came in with a very red pustular eruption on his forehead and both cheeks. This came, he said, when the antrum got sore, which happened every three or four months. A probe in the old opening revealed a necrosed bone or some other object. The first four *x*-ray plates did not show the character of this object. Later ones showed two small roots of the second molar standing upside down in the antrum. When these were removed, the condition cleared up.

CASE 3.—Mr. H. came to the office in November, 1917, with a large corneal ulcer. This was treated by cautery and the usual remedies in these conditions, but without any improvement. Examination of the nose did not reveal pus, but one eye began to protrude more than its fellow. This led to the belief that the ethmoid and possibly the orbit might be the seat of infection, although there was no pus; consequently the ethmoid cells were opened, and the wall broken down in a couple of places into the orbit. There was not a great amount of pus found at the operation, possibly on account of the blood obscuring it, but, later, drainage made it quite evident that it was open, or a retention cyst was open. Improvement began and was complete although slow.

I have had patients who were advised to have their teeth removed to check progressive myopia. Of course, the result was not obtained, and the patients were very much disappointed.

I have had several patients advised to have some distant focal infection removed when their trouble was immediately at hand. Two patients within the last month, with corneal ulcers re-infecting themselves from the lids, were advised to have their tonsils removed, and some of their teeth out, to save their eyes. Treatment of the lids as well as the ulcers promptly gave relief.

Many more cases might be given but these

serve to illustrate several points which should be emphasized.

We should never be too certain of having removed the focus of infection, even when we have found it. For instance, removal of the teeth does not absolutely eliminate the possibility of a focus in the jaw. Do not give the patient the idea that the x-ray is in any way infallible. It is an indispensable help, but several plates may be required to determine the condition, and even

then you may miss it. We should not overlook the simple obvious cause of a condition searching for some mysterious obscure infection which might account for that condition.

Guard against over-enthusiasm in following up this interesting subject, remembering there is a definite scientific relationship between the primary focus and the secondary condition capable of demonstration, so that we should make our diagnosis as definite and positive as possible.

THE ETIOLOGY AND TREATMENT OF ACUTE POLIOMYELITIS*

By E. C. ROSENOW, M.D.

Mayo Clinic

ROCHESTER, MINNESOTA

The following facts, as stated in a recent report,¹ determined since my studies on poliomyelitis were begun, indicate that the pleomorphic streptococcus or the coccus found in such large numbers in the throat and tonsils and in smaller numbers in the nervous system have an etiologic relationship to poliomyelitis.

It is constantly present in the diseased tissues, from which it can be cultivated even many months after glycerolation. On injections of cultures into young rabbits and guinea-pigs it localizes specifically in the nervous system, and produces flaccid paralysis and changes in brain and cord which resemble those in poliomyelitis in man. From the brain and cord of these animals the organism can be isolated, and the disease again produced. The organism has been rendered filtrable. By means of the same methods the identical organism has been isolated constantly from the brain and cord of monkeys paralyzed with fresh, glycerolated, and filtered virus. The serums of persons and of monkeys having recovered from poliomyelitis, agglutinate specifically the more sensitive strains both from human and monkey poliomyelitis. Injections of the recently isolated aerobic cultures into monkeys render them refractory to virus. The aerobic form of the organism from human and monkey poliomyelitis produces antibodies in the serum of horses, in a large amount common for both, cross-agglutinating these strains specifically in high dilution. The serum of a horse immunized

with freshly isolated strains from monkeys protected monkeys relatively against intracerebral inoculation of virus, and had pronounced curative effects in the treatment of human poliomyelitis. Early intravenous injections were followed by almost immediate cessation of symptoms in a large series of cases.

The results of Flexner and Noguchi, so far as the cultivation of a small filtrable organism and its demonstration in the tissues in poliomyelitis are concerned, have been corroborated, but the results of our experiments indicate that this is the anaërobic and, according to Amoss' results, a non-antigenic form of the organism, which, under aerobic cultivation, clearly belongs to the streptococcic group of microorganisms. Both forms have been constantly demonstrated side by side in the tissues of poliomyelitis. Flaccid paralysis coming on soon after injection has been produced in monkeys with characteristic, although not typical changes in the cord with aerobic cultures, but the classic picture as obtained with virus in this species has not been secured. It may be suggested, however, on the basis of results already obtained, that this is due to the development of antibodies, since the organism in the aerobic form has marked antigenic powers.

DISCUSSION

THE PRESIDENT: I am sure that we are all more than repaid for coming to this meeting by listening to the address of Dr. Rosenow this afternoon. It has been an inspiration to us all because we see some light now in handling one of the most terrible diseases that we have to encounter in our practice.

The subject is now open for discussion. I am sure

*Author's Abstract of a paper presented at the annual meeting of the North Dakota State Medical Association, held at Fargo, June 19 and 20, 1918.

1. Rosenow, E. C., and Wheeler, G. W.: The Etiology of Epidemic Poliomyelitis, *Jour. Intest. Dis.*, 1918, xx, 281-311.

that many of the members will be anxious to ask Dr. Rosenow some questions, and I know he will be glad to answer them. I will ask Dr. Oftedal to open the discussion.

DR. S. OFTEDAL: I wish to confine myself to asking Dr. Rosenow two questions that occur to me. One of them is what relation he considers the so-called "Landry's paralysis" bears to poliomyelitis in the drawing signs, and the other is what is the value of Fehling's solution test in determining the presence or absence of poliomyelitis from the spinal fluid examination.

DR. ROSENOW: The exact relation of Landry's paralysis to poliomyelitis has not been worked out. The presence of reducing substances in the spinal fluid is considered of diagnostic value, quite comparable to the increase in globulin.

DR. V. J. LAROSE: I would like to ask Dr. Rosenow if the serum will produce any ill effects in the case of a mistaken diagnosis.

DR. ROSENOW: The serum will do no harm. The course of the disease in a case of tuberculous meningitis in which the serum was given, was not altered. The results were indifferent in a child who appears to have had a low grade myositis and arthritis not demonstrable on examination but enough to give a limp, and in whom the spinal fluid was found normal.

DR. L. VAN ES: I really have nothing to add to what Dr. Rosenow has said only to express my gratitude for his most lucid exposition of his work, which indicates that he is on the right track. If there is anything to be pointed out, I think it is in speaking of his observation of sporadic and epidemic cases. For all that we have to fight epidemic cases, we have to begin with sporadic cases, and the close attention that Dr. Rosenow has made us acquainted with, would undoubtedly cut short the terrific epidemics we have seen the last few years. Another point: if the rapid recovery after the serum injection does not indicate that the active disease-producing agent is rather a toxin than an actual bacterial disturbance, whatever we may call it, the rapid recovery after administering the serum seems to indicate that the damage to the anterior horn cells is of a toxic nature, and perhaps even active immunity in children that are particularly exposed might be produced by injection of the serum.

DR. ROSENOW: The serum appears to have neutralizing power, as well as bactericidal power. The results indicate clearly that the serum would have protective power when given prophylactically, but, since the incidence of poliomyelitis in children under ten years of age is one in 200, too many individuals would receive horse serum to protect one. Recovery without paralysis when the diagnosis is made promptly makes its prophylactic use unnecessary.

A CASE OF MEGACOLON WITH UNUSUAL COMPLICATIONS: REPORT OF THE CASE FIVE YEARS AFTER RADICAL OPERATION*

BY NILS TRONNES, M.D.
FARGO, NORTH DAKOTA.

Since Hirschsprung, in 1888, first brought the attention of the medical profession to the true nature of this disease, a considerable number of reports have appeared. Finney,² in 1908, collected 206 references, and in his article he gives an exhaustive statement of our knowledge of the disease up to that date. Since that date several reports have appeared, notably those of Lord Barrington, who reports autopsies of 19 cases occurring in the London Hospital in children under 12 years of age, and Neugebauer (169 cases). On the whole, it may be said that, while the condition is relatively rare, it has been fully and accurately described, and an exhaustive treatise at the present time would seem to be mere repetition.

As a résumé, it may be stated that there are two opinions as regards the origin of this disease. The one is that of Hirschsprung, who maintains that the constipation is caused by con-

genital malformation of the colon-wall,—a congenital connective-tissue hyperplasia and muscle-hypertrophy. He has shown several cases of enormous dilatation and hypertrophy a short time after birth, where, at post mortem, no anatomical obstruction or kinking was present.

The other opinion is that the hypertrophy and dilatation of the colon are secondary manifestations, caused by anatomical lesions,—kinks between sigmoid and rectum, strictures, valve-formations, adhesions, etc.

Rovsing quotes a case of a girl aged eighteen years whose bowels moved regularly and normally until she was fourteen years old. Constipation started a short time after menstruation began, first, with two, then with three to four days, and at last with ten to fourteen days between bowel-movements. At the time of the operation the circumference of the abdomen was thirty-six inches, and the colon enormously distended, and terminating in a kink, caused by a strong adhesion between the left ovary and the

*Read at the 31st annual meeting of the North Dakota State Medical Association, at Fargo, June 19 and 20, 1918.

sigmoid flexure; after dividing the adhesion the kink disappeared.

Our own case presents some unusual features which seem to warrant this report. The patient was twenty-eight years of age. There is a history of pregnancy before and after the operation. There are two children living and well, and one miscarriage, induced at seven months, a few weeks preceding the operation. There have been several periods of four, six, and even seven months without a bowel-movement; and, finally, the operation has been unusually successful in that nearly five years later the patient is perfectly well and has regular bowel-movements every other day or every day, without the aid of cathartics.

The following is quoted from the history given in the report of Dr. Grassick, of Grand Forks, N. D., at the time the patient was under his treatment in 1913:

History: Mrs. P., aged 26, born in Norway, came to America when three years old. Parents, healthy. She has two brothers and one sister, all healthy. Had constipation from childhood, and remembers that her mother spoke about it. Became gradually worse. When six years old, two to three weeks would elapse without a bowel-movement, and at fourteen years of age one to two months, and since then several intervals of over six months.

She first consulted Dr. Duncan, of Upham, who treated her for four weeks, and temporarily relieved the condition. She very soon, however, relapsed into her previous condition. She was placed in the hospital, and was relieved of a seven-months' accumulation of fecal matter. This required treatment for several weeks. She had normal movements for a short time afterwards, but in the autumn of the same year she again had trouble, and was treated by Dr. Hoffman of Climax, Minn., for a four months' period of continuous constipation. This was repeated in about a year for another like condition of four months' standing, and again in the spring of 1912 for a two months' term of no bowel-movement.

On January 26, 1913, she was referred to the hospital at Grand Forks for confinement, with a history of obstructed delivery from some cause not clearly recognizable. It was supposed to be a surgical case, and Dr. Mulligan, of Grand Forks, was called in consultation. He was retained, and the patient was treated conjointly by us until discharged.

When seen at this time the patient gave an immediate history of pregnancy at full term with labor pains quite severe for the past twenty-four hours. Up to this time she had been attending to her ordinary duties of a housewife, eating three good meals a day, and, as she expressed it, "feeling first-rate until labor pains started." There had been no bowel-movement for six months before.

An examination showed an abdomen enormously distended and not tympanitic. The uterus could be outlined in the center, and was of about normal development. Along the right and left sides of the abdomen,

however, and also transversely over the epigastrium, a solid nodular mass could be outlined, giving by palpation the impression of a fibroid. This mass so filled the pelvic cavity that examination of the cervix per vaginam was impossible. The rectum was full, and, on this, taken with the history of no bowel-movement since the first part of August, a diagnosis of fecal impaction filling and distending the whole length of the colon was made. Delivery under present conditions was impossible. To delay labor until something could be done, large doses of morphine were given. By manipulation, soap suds, oil, etc., immense quantities of feces were removed. This procedure was kept up for two days, during which time she had twenty-seven copious discharges. An examination at this time showed a fully dilated cervix, and with little difficulty a well-developed healthy child was delivered. The colon could now be easily outlined by palpation, and was about the size and shape of the circular elbow of an ordinary stove-pipe.

After a day's rest the process of removing the mass was continued, and kept up for five weeks, averaging from five to fifteen evacuations every twenty-four hours. Several times acute obstruction took place. On three separate occasions these were relieved by digital manipulations per rectum. The cause was found each time to be an invagination of the relieved bowel descending and obstructing the passage. The last time this occurred the obstruction was so high up that it could not be reached by the fingers. It was a complete occlusion, produced by a kink or volvulus in the proximal loop of the sigmoid. The abdomen was distended to such an extent that we feared rupture. Something radical had to be done. The patient was placed on the operating table and carefully and sparingly anesthetized. The anal sphincter was dilated, and a capable and willing nurse with a delicate hand was instructed as to the technic. She had very little difficulty in entering the bowel, her arm being introduced nearly to the elbow. The obstruction was found and rectified. The hard fecal mass was broken up and taken away. The flatus was expelled, and from this time onward the patient made a rapid and uneventful recovery. She was sent home at the end of the fifth week, as far as could be ascertained, in perfect health. She nursed her baby while in the hospital, and it grew and waxed strong, and showed no sign whatever of intoxication from a bad milk supply. An operation for the removal of the colon was recommended, but the patient left the hospital in the condition above mentioned.

After she left the Grand Forks hospital in March, 1913, she felt well until she entered St. Luke's hospital, in Fargo, in October, 1913, with a six-months accumulation of feces, combined with a six-months pregnancy. She was pale, but otherwise appeared in good physical condition. The physical findings were very remarkable. The abdomen was enormously distended. The pelvic cavity contained in the lower stratum the head of the fetus, and above this was found a round stone-hard fecal mass almost completely filling the rest of the pelvic cavity. All efforts

to dislodge the latter by injection, manipulation, etc., failed. As it was evident that the fecal mass would be an absolute hindrance to eventual full-time childbirth, and as we could not reach the fecal impaction per rectum because of the presence of the head of the fetus, it was at last decided to induce premature labor since the condition of the patient was growing desperate, with pains and vomiting of an alarming degree. After a rather prolonged treatment with hot douches, bougies, and packings, and after much suffering and hard labor, she finally on the 30th day of November expelled the fetus, which lived for a couple of days. She made a good recovery in spite of a temperature between 100 and 102 degrees for some days after delivery.

About the middle of December, under anesthesia the anal sphincter was dilated and the rectum emptied manually after first breaking up the above-mentioned coprolith. With injections and massage during the following weeks the colon was practically emptied, and her physical condition markedly improved; and finally on the 16th of January, 1914, operation was performed. A median-line incision was made. As soon as the peritoneum was opened the distended sigmoid protruded. Upon inspection of the colon it was found dilated throughout its entire length from the cecum, gradually increasing in size and thickness to the sigmoid, while otherwise retaining its normal anatomical relation. The sigmoid was the most markedly dilated portion, and had the shape of an enormous letter S. The dilatation ended fairly abruptly about four inches above the anus; the whole sigmoid and adjacent parts of colon and rectum were easily movable, with no adhesions, band, etc., to be found. The sigmoid was resected between this place and about half-way up the descending colon. Above the resected portion the colon was freed, so as to bring it down to the rectum. The forceps was then removed from the latter, in order to palpate the inside of the rectum and also insert the finger through the anus from above, so as to exclude the presence of obstructing valve-formations that might interfere in the future. We then made an end-to-side anastomosis of the rectal stump into that of the descending colon. This part of the operation was very difficult because of the marked hypertrophy of the colon wall—in places up to one-half inch—and the immobility of the rectum. The resected portion measured thirty-four inches in length and nineteen inches in circumference. The inside showed no acute kinks or valve-formation.

At the operation we incidentally found a grapefruit-sized right-sided hydronephrosis. Whether or not this had any connection with her constipation is impossible to determine. No stones were palpated in the ureter.

The patient made a rather uneventful recovery. A slight stitch-abscess did not cause any impairment of the abdominal wall. The bowels moved on the second day, and after the fifth day they moved normally. She was out of bed about three weeks after the operation, and continued in fine condition, the bowels moving every other day without cathartics. After a few weeks she again became pregnant, and went to full term with no trouble, the bowels moving regularly. She was examined by proctoscope in January, 1918. The line of suture was plainly visible, but the general contour of the wall was perfectly smooth.

A barium enema x-ray taken at this time showed a colon practically normal in shape and size.

DISCUSSION

DR. JAMES GRASSICK (Grand Forks): I have very little to add to the paper of Dr. Tronnes. It was a very interesting case to me because it was unique in its way. In my experience I never had anything approaching it. I must congratulate the woman on falling into such efficient hands and the surgeon on the excellent outcome of the case.

The question has occurred to me, How long would this condition have continued without interference? The woman came to me for confinement at term, and she suffered little or no inconvenience at the time from fecal accumulation or impaction. She had gone six months then without a bowel movement, and had before gone several periods of four, five, six, or seven months, with no apparent inconvenience; and it is a question how long this would have continued before any serious trouble would have been experienced.

Another point of very great interest was the absolute absence in the patient of any toxic symptoms. When she came under my care she was apparently in excellent health,—well nourished, of good physique, and feeling, as she said, absolutely well, and had no trouble whatever. During all these years she has been giving birth to children in regular succession, and when this baby was born it was hale, strong, healthy, and well nourished. Not only that, but it nursed at her breast, and, as has been said, grew and waxed strong without any toxic symptoms at all. It all just emphasizes the fact that nature, when given a fair field and no favor, will do wonders in accommodating the system to abnormal conditions.

I was very much interested also in the size of the specimen. My description of it was that it appeared from outside manipulation to be like the elbow of an ordinary stove-pipe. The dimensions as given by the essayist, being thirty-four inches long (nearly three feet), and nineteen inches in circumference, which is practically six inches in diameter, would make it con-

form very closely to the size and shape given in my crude figure of speech.

I thank the essayist for presenting this case, and must again congratulate him on its successful surgical management.

THE PRESIDENT: Any other member wish to discuss this paper? Dr. Mulligan, you saw this case.

DR. THOMAS MULLIGAN (Grand Forks): I am sorry that I missed practically all of Dr. Tronnes' paper, but there are no interesting features to the case that Dr. Grassick has not already enumerated. I might mention one complication which occurred during the stay of this patient in the hospital while Dr. Grassick was away and he left the patient under my charge. The woman had been making an uneventful convalescence but suddenly she developed a very marked distention which came on very suddenly and we were in a quandary as to what was the cause of it and what we should do for it. It was a very acute crisis, so the inspiration came to us that we better have one of the nurses explore the bowel. The head nurse in the hospital was rather a small woman, and she had a small hand. We requested her to pass her hand up into the descending colon as far as she possibly could, and she succeeded in locating a hard mass of feces in the sigmoid flexure, which had apparently collapsed into the descending colon and caused an obstruction. That was relieved manually,

and she immediately passed a quantity of gas, which gave her relief.

I wish to congratulate Dr. Tronnes on the very successful outcome of the case.

DR. PAULSON: You stated that this patient had gone several months different times without bowel movements. I would like to ask had that been relieved or was there spontaneous evacuation of the bowels or would she have to go to the doctor to have the constipation relieved each time?

DR. NILS TRONNES (Fargo): I am sorry I couldn't exactly answer that question. Whenever it became alarming she went to the doctor and I presume the doctor took care of it and the bowels moved.

THE PRESIDENT: Any other discussion or questions? If not, I will ask Dr. Tronnes to close the discussion.

DR. NILS TRONNES: I haven't anything further to add. The ordinary procedure in these cases is to go in and resect that part of the colon that seems to be mostly affected. It is very seldom necessary to resect the whole colon, generally the sigmoid and the lower part of the descending colon.

Dr. Rovsing, in the case mentioned in the paper, after having severed the adhesion, performed an appendicostomy, and succeeded in relieving the condition with injections, etc. The patient got entirely cured.

BOOK NOTICES

THE 1917 COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minnesota. Octavo of 866 pages, 331 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$6.50 net.

This volume brings together under one cover very helpful reading matter for both specialist and general practitioner. Among the thirty-five contributions, one is sure to find helpful suggestions, no matter what his particular line of work may be. A special mention might be made of each article, because of its excellence. Particularly interesting to the diagnostician and surgeon are the contributions by Drs. E. S. Judd on the "Surgical Treatment of the Prostate"; W. J. Mayo, "A Study of the Rectosigmoid" and "Myomas of the Uterus, with Special Reference to Myomectomy"; E. C. Kendall, on the "Thyroid Hormone"; J. H. Stokes, on "Luetin Reaction in Syphilis"; and "Observations on Intensive Combined Treatment of Syphilis." Judd takes the advanced position, with good logic, that the combined or two-step operation is not indicated as often as most other matters recommend. His preparation is mostly by the means of the catheter.

Dr. W. J. Mayo takes the position that myomectomy is a more conservative method of treatment than the treatment by radium. His treatment of the subject makes more popular the thought of myomectomy, which has probably fallen into more disuse than the conditions warrant.

The paper of Dr. E. C. Kendall is highly technical,

and of the same value. His discussion is of particular value now that so much is being said and done in conditions of goiter.

Dr. J. H. Stokes gives a very forceful discussion and presentation of facts both on the luetin re-action and on the intensive combined treatment of syphilis. He brings out facts which ought to be of real interest to everyone, no matter what line of medical work he is pursuing. —BOOTH.

CONCERNING SOME HEADACHES AND EYE DISORDERS OF NASAL ORIGIN. By Greenfield Souder, M. D., Clinical Professor and Director of the Department of Laryngology and Rhinology, Washington University Medical School, St. Louis. Cloth. Price, \$7.00. Published by C. V. Mosby Co. 1918.

This is a book of 260 pages with 115 illustrations. Many of the illustrations are photographs of wet specimens.

The introduction by Jonathan Wright, M. D., takes up pathological anatomy.

There is, first, a consideration of (1) headaches in general, (2) headaches of nasal origin, and (3) megrim. This is followed by a discussion, or rather a description, of headaches with more or less eye disorder due to (1) closure of the frontal sinuses without suppuration, (2) syndrome of nasal ganglion neurosis, (3) the picture of hyperplastic sphenoiditis.

Diagnosis and treatment are fully discussed, and many illustrative cases are cited.

It is an excellent book, and will be a helpful and practical addition to the rhinologist's library.

—WOOD.

THE JOURNAL-LANCET

Represents the Medical Profession of

Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the

North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.

H. J. ROWE, M. D. - - - Casselton, N. D.

H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

NOVEMBER 1, 1918

THE JOURNAL REFERENDUM MUDDLE IN THE MINNESOTA STATE MEDICAL ASSOCIATION

The transactions of the annual meeting of the Minnesota State Medical Association, held in Duluth in August, appear in the October issue of *Minnesota Medicine*, and the discussion concerning the referendum resolution passed by the 1916 House of Delegates, together with certain official reports, shows a state of affairs in the Association discreditable to the profession for permitting it and especially to the clique of men responsible for creating it. Unless the domination of this clique, some of whom are working to advance their personal interests, is soon ended, the high standing of the Minnesota profession will be seriously impaired and its work will be impeded.

The words and the course of Dr. Buckley, the seeming head of the clique, impeach his veracity and confirm the truth of our previous statement that he has introduced into the Association the methods of the political trickster; and his motives are clearly open to question.

Let us recapitulate the whole journal situation. When the Association asked, some years ago, the two medical journals in the state to submit terms upon which one might be made the official organ of the Association, the *St. Paul Medical Journal*, published by the Ramsey County Medical Society, made an offer that no self-

respecting body of professional men would accept. It was, in short, an offer to publish the Association's transactions and papers in a department of such journal under the editorial supervision of the editor of that journal. The publisher (a layman) of the LANCET offered the Association absolute control of its editorial and advertising pages, the LANCET to be conducted by the Association with all the rights and privileges inherent in ownership, the publisher retaining the business management. This offer was accepted, and the contract was renewed from time to time without change until the journal's relations with the Association terminated, on January 1, 1918. During this entire period the publisher never refused to follow a request or a demand made by the Publication Committee upon any point. Two or three slight points of difference, wholly outside of advertising, arose, and were easily and harmoniously adjusted.

At the expiration of each term of the contract (the wording of the original was never changed) the *St. Paul Medical Journal* made strenuous, but *proper*, efforts to supplant THE JOURNAL-LANCET; but at no time until 1916 did the question of ethical advertising come up, nor could such question arise between the publisher and the Association, for it was a question solely between the Association and its own representatives, the Publication Committee, which had the matter under its absolute control.

At the 1916 meeting, held in Minneapolis, the question of ethical advertising came up for the first time, and was then urged merely as one of several reasons for making a change. The question was effectively settled by the unqualified statement of both the editor and the publisher of THE JOURNAL-LANCET that the matter was wholly in the hands of the Publication Committee. The emphasis was then shifted upon three distinct points:

1. The Association needed a bigger journal, one that could publish all the papers read before the leading medical societies of the state, together with the transactions of such societies.

2. The Association should have a better journal.

3. The Association should have the large profits arising from the publication of its own journal.

At this time the Ramsey County Society offered its journal as a free gift to the Association, which, it may be said in passing, had been virtuous (ethical) for nearly a year, or for nearly one-seventeenth part of its career.

At this time Dr. Edward W. Buckley, who had practiced medicine in St. Paul for many years, but who, according to his own statement (*Minnesota Medicine*, October, 1918, p. xxx), had never before attended a meeting of the Association, led the discussion for the Ramsey County Medical Society, assisted by Dr. R. E. Farr and Dr. E. R. Hare, both of Minneapolis, the latter now being secretary of the Association in place of Dr. Thomas McDavitt, who was kicked out of office by this clique.

At this meeting the matter of publishing a journal by the Association was referred to a committee of five, of which Dr. Buckley was made chairman. The resolution to create this committee was offered by Dr. Litzenberg and read as follows:

"... I would, therefore, move all matters in regard to a state medical journal be referred to a committee of five; said committee to report to the House of Delegates, for final consideration at the next annual meeting, the report to be previously furnished to every component society for consideration and recommendation."

An amendment was offered by Dr. Farr and accepted requiring the committee to report within six months, which has been accepted to mean to report to the component societies within that time.

At the next annual meeting, held in St. Paul in 1917, in spite of a vote of four to one by the journal committee against the publication of a journal by the State Association, the House of Delegates voted to publish one. When attention was called to the fact that no referendum vote had been taken in the component societies, Dr. Buckley admitted the fact, and assumed the whole responsibility for the failure, making an absurd excuse for it, while maintaining that it was a "minor detail" of no importance. The pins had been set up, and the game went on just the same.

At the recent meeting of the Association, held in Duluth in August last, Dr. J. Warren Little, of Minneapolis, attempted to undo the wrong done in the prevention of a referendum vote. He introduced a resolution to this effect at the first meeting of the House of Delegates. Dr. Buckley protested vehemently against the statement, made in the preamble of Dr. Little's resolution, concerning the referendum vote, and challenged anyone to prove that such a vote was ordered. Drs. Farr and Litzenberg supported him in his contention in a negative way, as neither could recall the order for a referendum. As the

secretary did not have a copy of the minutes of the 1916 meeting, and as Dr. Little could not prove his assertion other than from his memory, Dr. Buckley's contention was taken as correct, and the House voted unanimously against Dr. Little's resolution, which, in the absence of proof of the truth of the statement in the preamble, was out of order. For the time being Dr. Little accepted it as such.

At the next meeting of the House, Dr. Little, with a copy of the official minutes of the 1916 and 1917 meetings in his hand, rose to present the facts and to renew his resolution. The clique evidently knew what was in store for them, and Dr. Buckley rose four times within as many minutes shouting to the chairman, "I rise to a point of order." He carried his point of order; he prevented the undoing of a wrong, but the parts of the minutes of the meetings of 1916 and 1917 bearing upon the subject were read into the minutes of the 1918 meeting, and unmistakably show that a referendum vote of the component societies was called for in the resolution appointing the committee of which Dr. Buckley was chairman, and also that he assumed the responsibility for the committee's failure to make such referendum vote.

The political trickster always resorts to parliamentary tactics to cover up his wrong-doing.

Dr. Buckley's own words are stronger condemnation of himself than any words his severest critic could utter.

The sincerity of Dr. Buckley's claim that he broke into the Association on an errand of ethical reform was contradicted by words out of his own mouth when he said (*Minnesota Medicine*, October, 1918, p. xxx):

I favored a medical journal owned, edited, and published by the State Association which would carry clean advertising and if my position was not favored by the Publication Committee of the Ramsey County Medical Society, I would drop the whole matter.

What an earnest seeker after reform! Ready to shy off if somebody did not favor his position!

The ethical longings of the clique have gone glimmering.

And what about the bigness of the new journal? A count of its pages punctures the sincerity of this claim, although Dr. Buckley furnishes an explanation of the matter in these words: "* * * The man who would start a big medical journal would be a fool in these times of high cost of paper, printing, publishing, with a diminishing subscription list on account of the war."

It is possible that four out of five of the journal committee appointed by the 1916 House thought a man who would *advocate* the starting of a journal in January, 1918, was a fool!

Not a little was said about the report of the Publication Committee with the implication that such report would make Dr. Little's resolution unnecessary. The report followed, and the financial end of it is a curiosity. Its meaning is past comprehension. It shows a muddled state of the committee's finances. Here it is, verbatim et literatim:

FINANCIAL STATEMENT OF MINNESOTA MEDICINE

ASSETS

Subscriptions and Advertising Accounts received	\$2,275.89
Advertising Accounts due.....	1,441.00
Amount receivable from Minn. State Medical Association for subscriptions.....	1,440.00
	<hr/>
	\$5,156.89

LIABILITIES

Expenses to date.....	\$3,399.96
Sept. issue estimated.....	420.00
	<hr/>
	\$3,819.96

What does it mean? No expert accountant in America can tell. Do the members of the Publication Committee know? Does the president of that committee who made the report know? We think not.

In the report of Dr. E. R. Hare, then treasurer, to be found on a preceding page of *Minnesota Medicine*, his receipts contain an item of \$2,266.39 for *Minnesota Medicine*, while his disbursements contain an item of \$3,400.62 paid to *Minnesota Medicine*.

As the total receipts (called "assets" in Dr. Farr's report) of the Publication Committee are only \$2,275.89, what has become of the balance of \$1,124.73, the difference between the total receipts of the committee and the amount paid to *Minnesota Medicine* by the treasurer?

The amount due from the Association for subscriptions is put at \$1,440. As the Association is to pay the Publication Committee \$1.00 per member a year, and as the membership was 1,426 on August 1st, according to the Secretary's report, how can the Association owe \$1,440 on subscription accounts at the end of eight or nine months?

Has *Minnesota Medicine* made in nine months the difference between its "assets" (\$5,156.89) and its "liabilities" (\$3,819.96), that is, \$1,-

336.93? This financial statement seems to show such a profit.

Typewritten copies of the financial statement were given to members of the House of Delegates at Duluth, with an additional line, reading, "*The editor's salary has not been paid.*" Such information does not appear in the committee's report. Why not?

Is it an "asset" or a "liability"?

A QUESTION OR TWO

What is the fruit of this clique's work up to date? Dr. Earle R. Hare, the present Secretary of the Association, answered the question in these words (*Minnesota Medicine*, October, 1918, p. xxxi):

It seems to me that, even with a divided profession, a few who have been actively supporting Minnesota Medicine, and those who have been violently opposed to it and others not so openly, that we owe a great deal to the Publication Committee. . . .

A divided profession! A few actively supporting Minnesota Medicine! Those who have been violently opposed to it, and others not so openly!

The profession "be damned" is the unmistakable reply of the clique to Dr. Little's plea for fair-play.

Will the *Journal of the American Medical Association*, after reading the transactions of the last meeting of the Minnesota State Medical Association, say "Well done, Minnesota"?

THE MINNEAPOLIS BOARD OF HEALTH AND THE BOARD OF EDUCATION

Minneapolis has passed through a brief session of defiance of authority as between two boards, the Board of Health and the Board of Education. The Commissioner of Health, Dr. H. M. Guilford, some time ago closed the public schools, and the order was received with approbation all over the city, but, after a week, the Board of Education decided to open the schools in defiance of the Health Commissioner's ruling, evidently intending to carry the matter, if necessary, into the courts, and it is to be hoped that they will. Thus far the courts of the state and the district have upheld the health laws incorporated in the statutes. These laws give the health authorities full power to act in an emergency, or when an epidemic is threatened; and, if there ever was a time when an epidemic was in progress, it is at the present season with influenza raging over the land. Fortunately for Min-

neapolis, the Board of Education has some good members who are sensible men, who are far-sighted, and who are not narrow-minded in their viewpoints; but for some unaccountable reason, except as to be commented on later, the Board decided to test the authority of the State Board of Health. When the Board of Education ordered the opening of the schools, the Health Commissioner took a very firm stand, for which the citizens are very much indebted to him. He served notice on the School Board that the schools must be closed, and, in order to do this, he ordered the City Police Department to see that the ruling was enforced. Evidently, the Board of Education saw the point after it was thrust at them so vigorously, and they amicably complied with the request, and the schools are closed, as Dr. Guilford said, "for two weeks or two months, all depending upon the epidemic conditions."

The real cause of the friction between the Board of Education and the Board of Health was due to the very enthusiastic presentation of the subject by the Christian Scientist member of the Board of Education, Henry Deutsch, who is an attorney and consequently may be considered familiar with the law. He has been playing quite a conspicuous part in the columns of the newspapers lately, and has attempted to pass upon various things which he had better dismiss from his mind. And he has further attempted to influence other men connected with the Board of Education, and has evidently succeeded. This Christian Science endeavor to break into the health proposition showed Mr. Deutsch up in a very peculiar light. He said that he had received only one telephone message asking that the schools be closed, and that children were not affected by the epidemic. The latter statement, of course, was very hasty and ill-timed, because he knows nothing at all of the situation. If he would consult the records of the health department, he might change his mind, and would if he acts upon indisputable facts.

We have no hesitancy in saying that if this thing is brought into the courts, the Board of Education in Minneapolis will stand in a very unenviable light. Mr. Deutsch claimed that the medical department of the Board of Education, which includes a few examining physicians and a very few nurses, has opposed the closing of the schools. Mr. Deutsch, too, further attempts to get around the situation by saying he would favor closing schools upon the order of the Chief of Police rather than accept the order from the

Department of Health. Of course, everyone knows that the Chief of Police, Mr. Harthill, simply carried out the instructions of the Commissioner of Health, and, as a matter of fact, the Health Department closed the schools. Mr. Deutsch is not to be on the next Board of Education. He has completed his term, and will retire. It has been rumored that some of the officials of the schools are more or less tainted with Mr. Deutsch's theories. If this is true, it is a very unfortunate state of affairs.

When the order of the City Board of Health was finally accepted, only one member, Mr. Deutsch, voted against it, and he voted in the face of an unmistakable public opinion. Many teachers were sick, and less than 50 per cent of the enrollment of the school children were present at the opening of the schools on the day they re-opened. This shows that the people are wise, and knew what was right.

Perhaps it is a good thing that this friction has been brought about; for it may show future boards the difference between a board of health and a health committee of the Board of Education.

THE PULMONARY INFLUENZA PROBLEM

Dr. Guilford's opposition to the order of the Board of Education opening the schools, is further justified by an order from the Public Safety Commission following a recommendation made by the State Board of Health in which the Safety Commission places a ban on all public meetings, and, incidentally, its order goes out that all public schools shall remain closed. The daily press on October 22d, announced that twenty-nine deaths had occurred within twenty-four hours, and that 1,521 new cases of influenza had been reported. These cases, fortunately, were not all serious, but many of them were sufficiently so to warrant every effort to prevent the spread of the disease. The Public Safety Commission did not attempt to issue a blanket order, because such matters may safely be left to local health authorities. Dr. H. M. Bracken, Secretary of the State Board of Health, was not in favor of closing the schools, but, when they were closed, he was emphatically opposed to their being reopened until the epidemic had subsided.

Apparently, the disease is somewhat on the increase, but the death-rate has not appreciably increased over the normal, and is low considering the population and the crowding of audiences in

public places. On October 20th some of the churches decided to reopen, but others decided to remain closed until it becomes perfectly safe to hold services. It was rather amusing to note the church arrangement in which every other seat and every other pew were to be occupied, thus endeavoring to separate the sitters at least six feet, but such an arrangement of the congregation does not insure safety. In the Catholic churches mass was said at different hours, and only a certain number were permitted to attend church at any meeting.

Considering the fury of the epidemic elsewhere and the number of cases that have been reported, everyone, both medical men and laymen, should do everything possible to prevent the spread of the disorder. Of course, one hears all sorts of rumors of the enormous death-rate in camps, particularly, but this can safely be discounted about 75 per cent, just as most rumors can safely be discounted.

The effort of all health authorities now, and probably for some time to come, will be made to restrict close communication and contact with people who are afflicted with influenza, and the deaths which have occurred among the nurses and doctors who have taken part in the work of rescue and care, show that the close contact with cases of influenza is dangerous.

At the present writing the schools and theaters remain open in St. Paul, and the argument which was brought to bear in Minneapolis for the reopening of the public schools was that thousands of people went from Minneapolis to St. Paul to attend the moving-picture shows and other places of amusement. This is absurd on the face of it, and has no basis in fact. It is to be hoped that before the next issue of *THE JOURNAL-LANCET*, the situation will be entirely cleared, or, at least, be clear enough so that the people may feel safe and secure against an invasion of influenza and pneumonia. Of course, an epidemic of this kind calls for a remedy, and many are offered, but, fortunately, few are chosen. At the present the use of serum is experimental. The combined anti-influenzal and anti-pneumococcic serums have strong advocates. Some physicians go so far as to claim that an injection of serum into a perfectly healthy person will make him immune to influenza, but this is a delusion and a snare, for it is well known that no such serum will immunize a patient more than three weeks, whether it be influenzal or pneumonic; consequently, the plan of

injecting people with serum to prevent their having an attack is not very scientific.

The best remedies are good care, rest, fresh air, plenty of food, and some mild remedy to relieve the muscle pains.

THE PLIGHT OF DR. GEORGE G. EITEL, OF MINNEAPOLIS

Rumors come so thick and fast in these days that Dr. George G. Eitel found it necessary to come out in the daily press with an open, frank, and unequivocal statement as to his loyalty. To the writer's knowledge more wrong has been done Dr. Eitel and his wife than anyone could apparently endure. Within twenty-four hours it was reported that he and his wife had been interned in a camp, that he and she had been sent to the Federal Penitentiary for twenty-five years; that he had been conducting hypodermic poison experiments on enlisted men; that he had been shot on the street; and, to cap the climax, that he had committed suicide. It was also reported that he and another surgeon in Minneapolis with from two to five nurses were shot at sunrise at Fort Snelling.

This seems to us terrible torture to which to submit a man. However, the atmosphere is clear. Dr. Eitel is still working at his hospital, doing all the good he can for the sick, and he is ably helped by his wife.

It is strange how people get hold of rumors based upon absolutely nothing, which are exaggerated and magnified until they become ridiculous. Not only that: some people are malicious in their slanderous attacks, and few men could have stood the criticisms that Dr. Eitel has stood without making any defense. It is indeed strange that people—and even the better class—will take a wild, absurd, and malicious rumor, and spread it broadcast. In Dr. Eitel's case the Department of Justice stepped into the breach, and summoned some of these gossip-mongers before them, and told them some plain truths, and said to them that, unless they kept still they themselves would be subject to punishment.

The old Oriental warning still holds good: "Believe nothing that you hear, and only half what you see." If people would go about their own affairs, tend to their own business, and let other people's business alone, all gossip would die out. It is quite evident that most people who believe these absurd things, these improbable, exaggerated stories, are in themselves deficient mentally.

Dr. Eitel is not the only man who has been attacked by these gossip-mongers. This same story, or one very similar to it, has been in evidence in almost every camp in the United States. Letters from men in cantonments have gone out with the statement that certain doctors had inoculated a certain number of soldiers, and that from two to twelve deaths resulted, following which the doctors were taken out and shot, presumably back of the barn at sunrise. All of this is idle, malicious, vicious gossip. The United States does not deal with people that way. Of course, there are many doctors who have been indiscrete in conversation, but they do not deserve the virulent accusations of these irresponsible people. Some have talked in a pro-German manner, and have repented; some have not talked much, but have thought in a pro-German way, though some of this class are wise enough to keep their thoughts to themselves and some of them are not, and seem obliged to express their individual opinions in spite of the fact that they are living in America where everything is done for their comfort and pleasure, and where they are earning a livelihood through the efforts of a free and loyal country.

Dr. Eitel made an unequivocal denial of either talking or thinking in a pro-German manner; and the *Evening Journal* of Minneapolis gave his statement the unusual prominence of a "box" on its first page. This statement is a challenge to any man to deny a word in Dr. Eitel's statement, and the absence of such denial should be accepted as Dr. Eitel's complete exoneration.

OUR FOREIGN GUESTS

Dr. Franklin H. Martin, Chief of the Medical Defense in Washington, announced to Dr. W. J. Mayo that the following guests from abroad were to be in Minneapolis on Wednesday, October 30, a few days after this issue of THE JOURNAL-LANCET goes to press. These men are six of the most celebrated surgeons of the world, and are sent over here by their respective governments to attend the National Congress of Surgeons which was to have been held in New York City, but the meeting has been given up on account of the influenza epidemic.

As the foreign visitors are in this country, and others are on their way, bringing with them scientific papers, which they were to read at the Congress, it is thought that some of these papers will be read before the Twin City physicians.

The subject of these papers will be the latest points in military surgery.

The following were the guests:

Sir Thomas Myles, Dublin.

Mr. G. Grey Turner, Newcastle-on-Tyne, England.

Colonel George E. Gask, Bartholemew's Hospital, London.

Professor Raffaele Bastianelli, Rome.

Professor Pierre Duval, Paris.

Professor Henri Beclere, Paris.

At this writing the plan of the committee is to show the guests about the University in the morning, and to give them a luncheon at the Town and Country Club, after which there will be an informal talk. Only a few can be invited because of the influenza regulations as to public gatherings.

The Twin Cities are highly honored by this visit, and no doubt gave the guests a cordial welcome. The Minneapolis committee of arrangements consisted of Dean Lyons, of the University Medical School, Dr. J. P. Sedgwick, Dr. E. K. Green, Dr. W. A. Jones, Dr. L. A. Nippert, and Dr. J. Warren Little.

MISCELLANY

MEMORIAL TO FRANK FAIRCHILD WESBROOK, M.A., C.M., M.D.

Dean of the Medical School, the University of Minnesota, 1906-1913

The Medical School of the University of Minnesota receives with profound sorrow the tidings of the death of its former Dean, Frank Fairchild Wesbrook.

The men and women of the Faculty who worked with him and knew him intimately for many years know that "A Master in Israel has fallen." They know that a scientist in medicine, who ranked among the marked men of his day, is gone. But they know, too, that a leader whom they gladly followed, an administrator who directed with intelligent power the destinies of the school, a counsellor in whom they trusted, a friend of golden days gone by whom they loved, has passed into the Great Beyond. His going reminds them of the strong man he was, of the great work he did, of the worth of his friendship and the joy of his companionship, which again, with renewed consciousness of loss, they lose.

To Mrs. and Miss Wesbrook they send the

message of their sympathy and the assurance that his memory will be cherished in the hearts of his associates who remain and in the annals of the school he so greatly helped to upbuild.

With the death of their old Chief a significant chapter in the history of the Medical School of Minnesota is closed.

E. P. LYON, *Dean*.

RICHARD OLDING BEARD, *Secretary*.

HOW THE MINNESOTA STATE BOARD OF HEALTH WOULD DEAL WITH INFLUENZA

In a series of five circulars to health officers the Minnesota State Board of Health has set forth its views and instructions in the matter of dealing with influenza. We summarize the points in these circulars as follows:

1. The disease must be reported.
2. The patient must be isolated.
3. The attendants should wear face-masks.
4. The children from an infected household should be kept home from school and no permit for their return should be given until five days after the subsidence of the last clinical case in the family.
5. Wage earners continuing their occupation must stay away from the sick.
6. No visitors should be permitted to enter house.
7. Foodstuffs must not be handled by anyone from the family in which influenza exists.
8. Quarantine may be enforced if necessary, but as a rule it does not work well on account of the rapid contagiousness of the disease.
9. It is against our policy to advise closure of schools. We feel that the children of a community can be kept under observation better if they are in school than if they are at large. Your teachers should be instructed to send home any child having a cold. No children should be allowed to attend school from a house where influenza exists, not because of any danger of their carrying the disease in their clothing or on their person, but because of the fact that in all probability they will come down with the disease themselves later, and we do not want any chance of infection from these possible carriers before the disease is recognized. If in any of the places the disease becomes quite general and the school attendance small because of the above order, the school should be closed and it should not be opened again unless a nurse can be present and have charge of the children for a time at least, to aid the teachers in noting any that may be ill, and excluding them from school. A survey of the school district should be made by a nurse after a school is closed before it is opened again.
10. Where death occurs from this disease, the same precautions should be followed as govern any other transmissible disease (diphtheria, scarlet fever, etc.). the funeral must be private.

ST. MARY'S NEW HOSPITAL BUILDING

Situated on the high bank of the Mississippi river in the city of Minneapolis with a view of almost unsurpassed beauty, is located St. Mary's Hospital, which

has just opened a new hospital building of 225 beds. It is notable for its well-nigh perfection in all things that go to make up an ideal hospital, and that please and instruct every medical man, whether surgeon or general practitioner.

Architecturally, it is simple in style, and pleasing because of its simplicity and excellent lines and the color scheme exhibited in the brick of which it is built and in the trimmings, the fenestration, etc.

The color scheme of the interior is likewise admirable, and can hardly be surpassed in a hospital. Its fairly broad and high corridors present evidence of the thoughtful consideration given to one of the hardest problems in hospital construction. The coldness and the bareness of the usual fireproof hospital corridor are not found here; nor, on the other hand, is the gaudiness of the hotel corridor. Good taste has avoided each extreme, and the first impression made upon the patient or visitor who enters the hospital, is pleasing, as it should be.

Every room makes a like impression; and here one sees the contrast between what, on the one hand, a lack of funds and good taste usually produces and, on the other hand, the result here attained without extravagance and with thoughtful and intelligent planning. The floors of terrazzo and the absolutely sanitary walls, with radiators hung several inches above the floor, and with the simplest of furniture, tend to coldness; but a touch of color in the glass of the large windows, a brass bed, a reclining chair, a dressing bureau, and immaculate bed-clothes are pleasing, and soften the plainness made necessary by sanitary considerations.

Every bed-room has its own ventilating shaft from the roof, and is thus an independent unit as to heating and ventilation. Its lights and its call signals are the most modern, and apparently nothing that conduces to comfort of body and peace of mind has been omitted.

A few high-priced rooms find justification, perhaps, in meeting the whims of the wealthy patrons whose large donations have made possible equal comforts in all the other rooms, which are within the reach, as to price, of all classes of people.

But the visiting surgeon will find many other things of interest to him. The nine operating rooms will perhaps first attract his attention, and here he will see a near approach to perfection in every detail. The walls are of Carrara glass with dull or hone finish; the light comes from extensive windows of north exposure and from indirect blue lights, thus eliminating shadows while giving sufficient light for operation; and the radiators are put between the outside glass of the windows and glass on the inside. They form glass boxes, which permit no circulation of air in the room to carry to the operating table any possible germ that may be carried into the room by surgeon or assistant. The window of the operating-room occupies nearly all of the room's north side. Each operating-room has the indispensable ante-room, with all essential appliances. There are also recovery-rooms, thus making it unnecessary to take a patient direct from the operating-table to his or her room.

A room or closet for instruments with 27 individual compartments, each large enough for all the instruments needed by a surgeon, will be appreciated by all operators.

Two bed-pan sterilizers on each floor make it easy

for the attendants to sterilize every bed-pan as many times a day as necessary.

The hydrotherapeutic department has every device essential to this line of treatment, and is, indeed, an elaborate affair with costly appliances to do this kind of work as it is done in such institutions as that at Battle Creek.

The x-ray and other usual hospital departments are complete in equipment.

The sun-rooms are attractive, and are an essential part of the modern hospital.

A special fracture-table insures results in many cases not otherwise readily obtainable; and a morgue capable of holding three bodies bears testimony to the humanitarian side of the hospital's provision for the unidentified dead.

The hospital attendants, most of whom give unrequited (in money) service, are well provided for in their quarters, rest-rooms, etc.; and a beautiful chapel meets the spiritual needs of attendants and patrons of the Catholic faith.

We have written the above, and we give space to it in the columns of THE JOURNAL-LANCET as an expression of our appreciation of the work done, and to be done on larger scale, for humanity in St. Mary's Hospital of Minneapolis.

NEWS ITEMS

Dr. E. K. Pfaff has moved from Minneapolis to Watkins.

Dr. D. A. Fisk has moved from Carpio, N. D., to Sparta, Wis.

Dr. W. F. McCarthy has moved from Delano to Fergus Falls.

Dr. E. D. Simpson has moved from Watertown, S. D., to Minneapolis.

The University of Minnesota opened to civilian students on October 23.

Capt. G. L. Gosslee, of Moorhead, left for Fort Oglethorpe, Ga., on October 15th.

Dr. R. R. Hogue, of Linton, N. D., received a captain's commission last month.

Dr. John Watson, of Holdingford, has received his commission in the Medical Corps.

Northfield has received a bequest of \$50,000 for a hospital for tuberculous patients.

Dr. M. S. Nelson, of Spring Grove, has joined the Medical Corps, and is awaiting orders.

Lieut. J. F. McDowel, health physician of St. Cloud, left for Fort Oglethorpe last week.

Dr. W. J. Cochrane, of Lake City, has received a captain's commission in the Medical Corps.

At the October examination for nurses' certificates in Minnesota there were 140 candidates.

Dr. John P. Miller, of Mandan, N. D., received his commission as lieutenant last month.

Dr. A. E. Voges, of White Bear Lake, has been appointed County Physician of Ramsey County.

Dr. A. E. Nichols, of St. Paul, has been appointed director of school hygiene in the St. Paul City Schools.

Work on St. Vincent's Hospital's new building at Billings, Mont., to cost \$400,000, will be pushed in the spring.

Capt. J. A. McLaughlin, of Minneapolis, has been honorably discharged from service for physical disability.

Dr. G. F. Brooks, formerly on the staff of the Rood Hospital, of Hibbing, has received a captain's commission.

The call of the Minnesota State Sanitary Conference for November 7 is indefinitely postponed on account of influenza.

Dr. G. W. Callerstrom, of Northwood, N. D., has received a captain's commission, and has reported at Fort Riley, Kans.

Dr. W. R. Humphrey, of Stillwater, has received a lieutenant's commission, and has been ordered to Fort Riley, Kas.

Dr. E. M. Farr, of Billings, Montana, has been appointed an examining physician of applicants for Red Cross work abroad.

The Southern Minnesota Medical Association meets in Mankato on November 25 and 26. The program will be out in a few days.

Dr. O. M. Limberg, of Bowbells, S. D., is to take charge of the practice of Dr. A. J. Kaess, of Fargo, while the latter is in service.

Drs. George C. Dittman, Clarence G. Perry, and Charles H. Zander, of St. Paul, received commissions as lieutenants last month.

Dr. C. F. Carstens, of the Rood Hospital, of Hibbing, has been accepted for the Medical Corps, and expects his commission soon.

Dr. E. T. Batchelder, of New Richland, has sold his practice to Dr. F. D. Brandenburg, of Hartland, and has moved to Minneapolis.

The recent order transferring Major J. C. Sessions, of Minneapolis, from Camp Lee, Va., to Camp Meade, Md., has been revoked.

Dr. H. G. Blanchard, of Waseca, who volunteered four months ago, has just been notified that his commission will soon reach him.

Dr. O. P. Ludwig, of the staff of the More

Hospital of Eveleth, has moved to Spring Grove, taking over Dr. Nelson's practice.

Stillwater's City Hospital is so inadequate for the service demanded that a movement for a new and modern hospital has been started.

The North Dakota Board of Nurse Examiners will hold examinations of applicants for registration on November 5th and 6th at Fargo.

Dr. J. E. O'Donnell, of Minneapolis, received a lieutenant's commission last month, and reported at Fort Oglethorpe for surgical instruction.

Dr. T. D. McMahon, of Raymond, will take charge of the practice of Dr. E. W. Rimer, of Breckenridge, while the latter is in the service.

Dr. James Grassick, of Grand Forks, has been appointed contract surgeon for Companies B and C located at the University of North Dakota.

Dr. H. B. Cole, of Franklin, has moved to Redwood Falls, and become associated with Dr. G. R. Pease under the name of Drs. Pease & Cole.

The trained nurses of Helena, Mont., have increased their wages from \$28 to \$35 a week for ordinary cases, and to \$40 for contagious cases.

The annual convention of the American Public Health Association, to be held in Chicago on October 14 to 17, was postponed to December 9 to 12.

Dr. O. W. Phelps, of Lemmon, S. D., will take charge of the practice of Dr. G. A. Sarchet, of New England, while the latter is in army service.

Dr. Goldie Zimmerman, of Sioux Falls, S. D., has reported in New York City, and hopes to sail for France soon, where he will do child's welfare work.

The departure of Lieut. Simon Raadquist for army service makes the fourth physician furnished the service by the Adams Hospital of Hobbing.

A Grand Forks (N. D.) newspaper says that in Oslo (Minn.), with a population of 350 there were over 200 cases of influenza. The village has no doctor.

Dr. J. Edwin E. Olander, of St. Paul, died last week, at the age of 41, of influenza. Dr. Olander was a graduate of the University of Minnesota, Class '04.

Montana promises to send a doctor-senator to Washington this fall. Dr. A. P. Stevenson, Roundup, has received the senatorial nomination on the Republican ticket.

Dr. F. C. Rodda, of Minneapolis, assistant professor of pediatrics of the University Medical School, has gone to France under the Red Cross to work among children.

Miss Esther Porter, superintendent of Bethesda Hospital, St. Paul, has been appointed by Governor Burnquist a member of the State Board of Examiners of Nurses.

Dr. Thomas W. Hovorka, of St. Cloud, died last month, at the age of 44. Dr. Hovorka was a graduate of the Minneapolis College of Physicians and Surgeons, Class '02.

The Bismarck (N. D.) Hospital Training School admitted a class of 14 on October 1st. The school now has 75 students, and is furnishing many nurses for army service.

Capt. A. S. Fleming, of Minneapolis, who has been for the past year examining men entering the aviation service, has gone to Camp Mills, Mineola, N. Y., for duty with the army.

Many of the leading cities of the Northwest have closed their public schools and prohibited all assemblies in churches, theaters, etc., on account of the so-called Spanish influenza.

Dr. Emil King, of Fulda, was recently killed while in service as a surgeon with an American army in France. Dr. King was 51 years of age, and had practiced in Minnesota for 25 years.

Dr. H. C. Doms, of Slayton, has purchased a residence building which he will remodel for use as a maternity and medical hospital, retaining his present hospital building for surgical cases only.

Dr. Howard Kerns, of Granite Falls, died last month of influenza at the age of 42. Dr. Kerns was a graduate of Johns Hopkins in the Class of '09. He came to Minnesota the following year.

Dr. Howard Lankester, of St. Paul, though 72 years of age, tendered his services to the Government, and has been ordered to Charleston, W. Va., to assist in handling the influenza at that point.

The sale of remedies for vice diseases, except upon a physician's prescription, is prohibited in Minnesota, and prosecution will follow known violation of this rule of the State Board of Health.

Dr. J. B. Clement, of Lester Prairie, recently went to Canada to visit his mother, and found all of his sister's family of nine children sick with influenza. Dr. Clement took the disease, and went to a hospital.

Dr. Sigurd A. Berg, of Granite Falls, died last month, at the age of 38, of influenza. Dr.

Berg was a graduate of Rush Medical College, Class '05. Granite Falls lost two physicians last month of influenza.

Dr. S. R. Maxeiner, of Minneapolis, who has been attached to the British Expeditionary Forces in France for fourteen months, has been placed in charge of the X-Ray Department of the 8th Casualty Clearing-Station.

The reports of the prevalence of the Spanish influenza from all parts of the Northwest border on the sensational. Many large cities and some counties have closed all schools and have prohibited assemblages of every character.

Dr. Mabel Ulrich, who is delivering lectures on social hygiene throughout Minnesota for the State Board of Health, was in Cloquet at the time the forest fires were approaching the city and were to destroy it within a few hours.

Dr. L. F. Schmauss, who formerly practiced in Minnesota and is now conducting the Alexandria Hospital of Alexandria, Ind., was recently elected president Eighth District Medical Society of Indiana at its annual meeting at Muncie.

Word was received in St. Paul last week that Dr. Charles Lyman Greene, now in the Surgeon General Office at Washington, holding a captain's commission, would be made a major. He is directing the work of reconstruction of wounded soldiers.

Dr. B. W. Jarvis, who has been associated with Dr. W. A. Jones, of Minneapolis, for over a year, has been commissioned lieutenant, and ordered to report at Fort Riley, Kas. Dr. Jarvis is the fourth man to leave Dr. Jones' office for the Medical Corps.

Dr. Frederick A. Bordwell, of Marmarth, N. D., died last month of influenza at the age of 39. Dr. Bordwell was a graduate of the College of Medicine of the University of Illinois, Class of '04, and a former resident of Stillwater, Minn., where he was buried.

At the annual meeting of the St. Louis County Medical Society last month, Dr. C. H. Schroder was elected president, and Dr. E. Z. Shapiro was elected secretary. Drs. M. S. Hirschfield and M. L. Burns, of Two Harbors, were elected first and second vice-presidents, respectively.

The Brown-Redwood County Medical Society met in New Ulm last month to try Dr. L. A. Fritsche in accordance with the demand of the Minnesota State Medical Association. Only 10 members attended the meeting. Two voted guilty; 5 voted not guilty; 3 did not vote.

Dr. Claude Campbell, a son of Dr. J. E. Campbell, of Melrose, died last month, of influenza, at the age of 35. He was a graduate of Northwestern, of Chicago, and practiced for some years at Starbuck. He recently moved to Decorah, Iowa, and had just joined the Medical Corps.

Dr. Albert G. Alley, a teaching fellow in the Medical School of the University of Minnesota, died last week (October 23), at the age of 38, of influenza. Dr. Alley was a graduate of the Medical School of the University of Minnesota, Class of '05, and was specializing in pediatrics.

Dr. E. J. Huenekens, of Minneapolis, the specialist in children's diseases, from now until June 1, 1919, will devote all his time to the University of Minnesota and the Child Welfare Division of the State Board of Health. He will give up private practice during that time, but will be privileged to see cases in consultation with other physicians.

Dr. Henry A. Schmidt, of Westbrook, died last week (October 24), at the age of 36, of influenza. Dr. Schmidt was a graduate of the Medical School of the University of Minnesota, Class of '09. His death at this time is a real calamity, for his practice covered an extensive territory, which cannot be served, because of the extent, by neighboring physicians.

Dr. H. M. Guilford, the City Health Commissioner of Minneapolis, points out that the number of deaths (including ten missing) among Minneapolis enlisted men since the war broke out up to September 1, was 210, while the number of deaths in the state from preventable diseases for the same period was 819, or nearly four times as many.

Lieut. William J. Ferguson, of Milbank, S. D., died last month of influenza at the age of 42. Lieut. Ferguson was a graduate of the Medical School of the University of Minnesota in the Class of '09, and after serving a year as interne in Asbury Hospital he went to Milbank. He enlisted in the Medical Corps last March.

Dr. Charles H. Hunter, of Minneapolis, died on October 15, of Bright's disease, at the age of 65. Dr. Hunter was a graduate of Columbia, Class of '78. He studied in Vienna for two or three years, and came to Minnesota in 1883. He was on the faculty of the University Medical School, and was an ex-president of the Hennepin County Medical Society.

The Department of Pathology, Bacteriology, and Public Health in the University of Minnesota

has been split into two departments, as follows: The Department of Pathology and Public Health, with Dr. E. T. Bell acting director; and the Department of Bacteriology and Immunology, of which Dr. W. P. Larson is director. The change makes for more concentrated effort and greater efficiency in each department.

The queerest epidemic that ever spread over this country struck the Twin Cities last month. It is an epidemic of rumors that one or more prominent physicians in every large city have been inoculating soldiers with germs of different kinds. Frequent telephone calls, from both men and women, came to our office one day last month concerning two physicians, against whom rumors of this kind were circulated. The same thing has occurred in many other cities.

Dr. Frank F. Wesbrook, president of the University of British Columbia, and formerly Dean of the Medical School of the University of Minnesota, died in Vancouver on Oct. 20, at the age of 50. Dr. Wesbrook was a truly distinguished man, in Canada, in the United States, and in Europe. His circle of friends was co-extensive with his acquaintanceship. It will be difficult to measure his influence in medical and educational matters because of its largeness. A memorial of Dr. Wesbrook appears on another page of this issue.

The American Red Cross has a very insistent call for a commission for Siberia. The men desired for this division are as follows: One metabolist, one tuberculosis specialist, one x-ray specialist, two oculists, and four pharmacists. The last-named are required to have experience in hospital accounting. Men speaking French, Russian, or Slovak, will be given preference for these positions. Men up to fifty-five years of age will be eligible for active service. The length of service is for one year, and the Red Cross will defray the expenses, provide the transportation, and, in exceptional cases, will allow a limited amount for the support of the family. Further details are on hand at the office of the Medical Advisor, Northern Division, American Red Cross, Dr. Henry Wireman Cook, Minneapolis.

RECENT ASSIGNMENTS AND TRANSFERS OF NORTHWESTERN MEDICAL OFFICERS

ASSIGNMENTS

Minnesota—

To Camp Dodge, Iowa: Capt. C. D. Freeman, St. Paul; Capt. G. F. Brooks, Hibbing; Lieut. C. A. Traeger, Faribault.

To Camp Pike, Ark.: Lieut. S. V. Hodge, Minneapolis.

To Fort Des Moines, Iowa: Lieut. H. W. Covey, St. Peter.

To Fort Riley, Kas.: Capt. L. M. Boyd, Alexandria; Lieut. H. L. Artz, Jackson; Lieut. L. M. Lowe, Glynndon; Lieut. C. S. Raadquist, Hibbing; Lieut. N. E. Jackson, Jordan; Lieut. W. A. Piper, Mountain Lake; Lieut. B. A. Doggett, Rochester; Lieut. W. R. Humphrey, Stillwater; Lieut. H. O. Ruu, Fosston; Lieut. J. D. Watson, Holdingford; Lieut. F. L. Hammerstrand, Sacred Heart; Lieuts. R. A. Bock, M. L. Larson, W. R. McCarthy, C. Woolson and F. V. Sangendorfer, St. Paul.

To Camp Meade, Md.: Capt. H. O. Hagen, Richland.

To Camp Wheeler, Ga.: Lieut. G. C. Dittman, St. Paul.

To Denver, Colo.: Capt. E. B. Daugherty, St. Paul.

To Camp Grant, Ill.: Lieut. L. A. Barney, Duluth; Lieut. H. E. Hufnail, Minneapolis; Lieut. C. H. Zander, St. Paul.

To Fort Oglethorpe, Ga.: Lieut. A. H. Schwartz, Duluth; Lieut. W. M. Empie, Virginia; Capt. C. L. Ilaney, Duluth; Capt. O. H. Urstad, Kiester; Capt. B. W. Parrott, Long Prairie; Capt. E. A. King and Capt. F. F. Winsell, Minneapolis; Capt. G. L. Gosslee, Moorhead; Lieut. C. R. Sanborn, Bemidji; Lieut. D. F. Noonan, Minneapolis; Lieut. J. P. McDowell, St. Cloud; Lieut. H. G. Blanchard, Waseca.

To Mineola, N. Y.: Lieut. A. L. Kusske, Minneapolis.

Montana—

To Fort Riley, Kas.: Lieut. G. H. Graham, Billings; Lieut. J. B. Sullivan, Butte; Lieut. P. S. Rennick, Stevenson.

To Jefferson Barracks, Mo.: Lieut. J. J. Flynn, Missoula.

To Camp Dodge, Iowa: Capt. G. L. Chapman, Great Falls; Capt. A. E. Longeway, Great Falls.

To Fort Oglethorpe, Ga.: Capt. C. S. Schwartz, Butte; Major W. C. Riddell, Helena.

To Fort Benjamin Harrison, Ind.: Capt. P. H. McCarthy, Butte.

North Dakota—

To Camp Grant, Ill.: Capt. R. R. Hogue, Linton; Lieut. A. J. Kaess, Fargo.

To Fort Oglethorpe, Ga.: Capt. C. W. McManus, Williston; Capt. A. A. Whittemore, Bowman.

To Fort Riley, Kas.: Capt. A. D. McCannel, Minot; Capt. G. W. Callerstrom, Northwood; Capt. W. H. Moore, Harvey; Lieut. L. R. Critchfield, Kenmare.

To Camp Beauregard, La.: Capt. M. W. Roan, Bismarck.

South Dakota—

To Fort Oglethorpe, Ga.: Lieut. O. B. Sheets, Carthage.

To Camp Dodge, Iowa: Capt. J. E. Schwendener, Bryant; Capt. F. M. Baldwin, Redfield; Capt. C. A. Butler, Dell Rapids; Capt. W. O. Leach, Huron.

To Fort Des Moines, Iowa: Capt. F. V. Willhite, Yankton.

To Fort Riley, Kas.: Capt. C. R. Burkland, Vermilion; Lieut. W. P. Collins, Howard.

TRANSFERS

MINNESOTA OFFICERS

Lieut. G. T. Nordin, Minneapolis, from Fort Oglethorpe, Ga., to Camp Crane, Pa.

Lieut. D. D. Turnacliiff, St. Paul, from Camp Grant, Ill., to Camp Custer, Mich.

Lieut. H. J. A. J. Hartig, Minneapolis, from Camp Sherman, Ohio, to Camp Custer, Mich.

Lieut. F. N. Knapp, St. Paul, from Camp Sherman, Ohio, to Camp Dodge, Iowa.

Lieut. C. F. Snell, Twin Valley, from Army Medical School, to Camp Grant, Ill.

Major J. C. Sessions, Minneapolis, from Camp Lee, Va., to Camp Meade, Md.

Lieut. F. W. Whitmore, St. Paul, from Camp McArthur, to Camp Meade, Md.

Capt. M. J. Lynch, Minneapolis, from Camp Zachary Taylor, Ky., to Fort Sheridan, Ill.

Lieut. V. H. Moats, Minneapolis, from Fort Bayard to the Southern Department.

Lieut. R. A. Johnson, Minneapolis, from Houston, Calif., to Berkeley, Calif.

Lieut. D. E. Nelson, Brainerd, from Camp Custer, Mich., to Camp Sherman, Ohio.

Capt. J. A. Gates, Kenyon, from Fort Riley, Kas., to Camp Travis, Texas.

Capt. C. C. Walker, Lamberton, from Fort Riley, Kas., to Camp Travis, Texas.

Major W. M. Chowning, Minneapolis, from Fort McPherson, Ga., to Camp Zachary Taylor, Ky.

Capt. M. M. Ghent, St. Paul, from Camp Grant, Ill., to Fort Benjamin Harrison, Ind.

Capt. M. C. Welch, St. Paul, from Camp Grant, Ill., to Fort Benjamin Harrison, Ind.

Lieut. H. E. Canfield, Willmar, from Camp Bowie, Texas, to Fort Bliss, Texas.

Lieut. W. B. Martin, Fergus Falls, from Ann Arbor, Mich., to Fort Oglethorpe, Ga.

Lieut. P. B. Gillespie, Minneapolis, from Minneola, N. Y., to Lake Charles, La.

MONTANA OFFICERS

Major Rudolph Horsky, Helena, from Fort Sheridan, Ill., to Camp Custer, Mich.

Lieut. J. D. Hobson, Missoula, from Rockefeller Institute, N. Y., to Cape May, N. J.

Capt. R. L. Owens, Hamilton, from Camp Shelby to Camp Gordon, Ga.

Lieut. J. E. Stuart, Livingston, from Fort Riley, Kas., to Camp Travis, Texas.

Lieut. J. W. Olson, Troy, from Camp Kearney, Calif., to Fort Sheridan, Ill.

NORTH DAKOTA OFFICERS

Lieut. J. B. Tyrrell, Underwood, from Fort Oglethorpe, Ga., to New York City (Bellevue Hospital).

SOUTH DAKOTA OFFICERS

Capt. B. A. Bobb, Mitchell, from Camp Pike, Ark., to Camp Beauregard, La.

Lieut. Rezin Reagan, Garretson, from Camp Dodge, Iowa, to Camp Crane, Pa.

Lieut. C. E. Van Demark, Sioux Falls, from Camp Grant, Ill., to Fort Benjamin Harrison, Ind.

Lieut. V. R. Hodges, Terry, from Camp Grant, Ill., to Fort Benjamin Harrison, Ind.

Lieut. B. C. Murdy, Aberdeen, from Fort Oglethorpe, Ga., to Fort Warren, Mass.

Capt. J. G. Chichester, Redfield, from Fort Oglethorpe, Ga., to Camp Dix, N. J.

Capt. J. F. McKie, Wessington, from Fort Oglethorpe, Ga., to Camp Gordon, Ga.

Lieut. H. D. Newby, Parker, from Lee Hall, Va., to Hampton, Va.

PHYSICIAN WANTED

To take charge of the medical department of a successful sulphur springs and mud bath sanitarium near the Twin Cities. Good salary. Give full account of yourself. Address 153, care of this office.

PRACTICE FOR SALE

A \$12,000 cash practice is offered for sale. In rich farming community, and no opposition; 65 miles from the Twin Cities; established twelve years, and books will show the exact business done. Must be taken at once. Address 149, care of this office.

LOCUM TENENS WANTED

A man to take charge of my practice for four weeks beginning October 20th. General practice, obstetrics, and surgery. Will furnish a man office, light, and fuel, and give him all he can make. Am taking in \$500 a month in cash. Address 152, care of this office.

TECHNICIAN WANTS POSITION

Middle-aged woman desires a position as technician in a hospital laboratory or physician's private laboratory. Can also develop plates and have some knowledge of x-ray. Have had six years' experience in physician's office. Can furnish references. Address 154, care of this office.

PRACTICE FOR SALE

A \$7,000 practice for the cost of part office equipment wanted. Real estate, optional. Modern village of 1,500 in central Minnesota, in fine dairy section. First-grade high school. Man must be capable. Terms to suit. Expect to go into Army soon. Address 151, care of this office.

PRACTICE FOR SALE

In a town of 5,000, only a few minutes' ride from Minneapolis. Collections will exceed \$10,000 cash this year. A suite of fine steam heated offices with exceptionally fine equipment; large territory. An opportunity of a life-time for a man who is willing to work. Can be had for the price of the equipment only. Address 150, care of this office.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-second annual session, opened Sept. 23, 1918, and closes June 7, 1919. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters. For further information address Charles Chassaignac, M. D., Dean, postoffice drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

In the Treatment of

RHEUMATIC and NEURALGIC ILLS

you will obtain substantial aid from the thorough use of

K-Y ANALGESIC

This non-greasy, water-soluble local anodyne will enable you to ease your patient's pain and discomfort, while your internal or systemic medication is combating the cause of his condition.

The advantages, moreover, of relieving the pain of a facial neuralgia, an inflamed joint, or aching lumbar muscles without recourse to coal tar derivatives cannot fail to appeal to medical men.

K-Y ANALGESIC is a safe and effective adjunct that will daily grow more useful to the practitioner as the many opportunities for its effective use are realized.

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT

15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

So many cases of

Pruritus, Chafings, and Irritations

are relieved by applying

K-Y Lubricating Jelly

that we feel we owe it to our patrons to direct their attention to the usefulness of this product as a local application, *as well as* for surgical lubrication.

No claim is made that K-Y Lubricating Jelly will act with equal efficiency in every case; but you will secure such excellent results in the majority of instances that we believe you will continue its use as a matter of course.

NO GREASE TO SOIL THE CLOTHING!

Collapsible tubes, 25c. Samples on request.

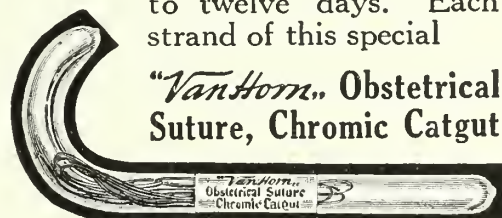
Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT

15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

IN THAT CONFINEMENT TEAR

If you favor immediate repair, use our especially chromicized catgut prepared to hold seven to twelve days. Each strand of this special



"VanHorn," Obstetrical
Suture, Chromic Catgut

is threaded on a suitable needle, ready for instant use. Indispensable for your surgical bag. One tube in each box. Price, 25 cents each; \$3.00 per dozen tubes. No samples.

OBTAINABLE FROM YOUR DEALER

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT

15 & 17 E. 40TH STREET, NEW YORK, U.S.A.



125 Million Explosions

Inside Every Kernel

That is what occurs in puffing wheat and rice grains.

The grains are sealed in guns, then revolved for one hour in 550 degrees of heat. Thus the moisture in each food cell becomes super-heated steam.

Then the guns are shot. The steam explodes. Each of the 125 million food cells is blasted. And the grains are blown to bubbles, eight times normal size.

The result is easy, complete digestion. No other process so fits grain for food. Few methods of cooking are one-half so efficient.

Corn Puffs are pellets of hominy puffed in a similar way.

This process, invented by Prof. A. P. Anderson, offers you the best-cooked cereal foods in existence. Also the most enticing.

The Quaker Oats Company

Sole Makers

Puffed Rice
Puffed Wheat
Corn Puffs

All Steam-Exploded Grains

PUBLISHER'S DEPARTMENT

THE ARMOUR LABORATORIES

It seems to be, fortunately, a well-established rule, at least in scientific business lines, that the larger an establishment becomes, the greater is its liability for the quality of its product and the integrity of its dealing. This is true because a slight departure in either respect has grave results, even from a monetary point of view.

The Armour medical laboratory products are of a very high order of merit, not only because of the high standards of the corporation, but also because its equipment enables it to produce any product it manufactures of uniformly high character.

The "4 Useful Products" the Armour Laboratory is now calling the medical profession's attention to are Chymogen, Corpus Luteum, Pituitary Liquid, and Thromboplastin Solution; and each of these products is used almost daily by every general practitioner.

AN X-RAY LABORATORY

The Standard Medical Supply Company, of Minneapolis, has a plan for putting into every physician's office an x-ray laboratory on terms that are attractive.

The physician who can give every break or suspected fracture in a bone the test of an x-ray picture, gains the confidence of the patient, and will often save himself and his patient great trouble.

From this single point of view an x-ray laboratory is a paying investment, while it may pay even better used for other diagnostic purposes.

Though we say it under our breath, the public assumes—and generally rightly so—that the man who has modern appliances in his office is a little, perhaps a great deal, better than the man who does not.

It pays to advertise—in legitimate ways.

THE OTTAWA TUBERCULOSIS COLONY

When a man becomes a specialist of the highest character, and takes an eminent place in his chosen field, such a man finds a hospital or home for his patients indispensable. In this way the Ottawa Colony was established by Dr. J. W. Pettit at Ottawa, Illinois, a location of many advantages.

Dr. Pettit has made an honorable name in medicine, and his work will be a lasting tribute to his scientific attainments and his humanitarian ideals.

The physician in the Northwest who has tuberculous patients whom he desires put into an institution, will do well to correspond with or visit this institution, or meet Dr. Pettit in his Chicago office, 202 So. State St.

RICE MATERNITY HOME OF FARGO, N. D.

The maternity home for unfortunate young women is a necessity in modern society, unfortunately; and it is the duty of the medical profession to know such homes as are themselves not "illegitimate" in the work.

The Rice Maternity Home of Fargo, N. D., is an institution which, this journal has ample reason to believe, is conducted in a thoroughly honorable manner, and is worthy the confidence of physicians.

PRODUCTS OF THE QUAKER OATS COMPANY

This company made a great contribution to the table of every family when it put its delicious oats on the market, and while its oatmeal as a breakfast food never becomes stale to many, some demand variety, and they find it in the company's three new products—modern products. They are called Puffed Rice, Puffed Wheat, and Corn Puffs, which are the exploded grains of man's best cereals—indeed, man's best food. The exploding process fits them for the table both because of their greater digestibility and because of their palatability.

If you don't know these "puffed up" products, just introduce yourself to them once, and you will never forget them.

THE KENILWORTH SANITARIUM

Kenilworth Sanitarium is located in Kenilworth, six miles north of Chicago, and is one of the notable institutions in this country for the treatment of nervous and mental diseases. Its physical equipment—that is, its building, outside and in—approaches perfection. Its medical staff brings to the work of the sanitarium the highest skill yet attained in the profession, and, in the treatment of nervous cases, this means both wisdom in the management of people and complete knowledge of medical science.

We believe this testimonial to the work of the Kenilworth Sanitarium is richly deserved by its management.

STANOLIND SURGICAL WAX

This wax is one of the numerous medicinal products from petroleum which the Standard Oil Company puts upon the market, and for which they claim decided advantages in the treatment of denuded surfaces inasmuch as it alleviates pain and assists the healing process of nature. This claim has been fully substantiated by men of unquestioned standing in the profession, and whose ability to determine the value of new therapeutic agents makes their testimony valuable.

This and the other products of petroleum, which are put upon the market by a thoroughly reliable organization, should be known to all physicians. For literature address the Standard Oil Company, 910 So. Michigan Avenue, Chicago.

SOMETHING DIFFERENT

The physician who employs Alkalol cannot fail to recognize, as well as appreciate, that it acts differently from what are generally referred to as antiseptic solutions.

Alkalol is hypotonic, which means that it is thus able to pass into impoverished or depleted cells those physiological elements, in the form of mineral salts, which are necessary to maintain the integrity and activity of cell secretions.

Alkalol rapidly demonstrates its efficiency in cystitis, urethritis, and vaginitis when employed as an injection or irrigating fluid. Alkalol makes an ideal application on tampon in cervical ulceration or erosion.

Alkalol is efficient when used as a wet dressing for hemorrhoids, balanitis, herpes genitalis, etc.

Interesting literature explaining the composition, mode of action and indications for the use of Alkalol will be sent gratis to physicians on request by the Alkalol Company, Taunton, Mass.

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

65 East Lake St. - - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aenaeerobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

DIPHTHERIA ANTITOXIN

In the book "The Crowd, a Study of the Popular Mind" (LeBon) there is related the story of a shipwrecked crew on a raft watching eagerly for some sign of a rescuing vessel. After some days of the great physical discomfort and mental anxiety imposed by their condition, one of the men saw on the horizon what he declared was a sail. His companions saw it, too, and because they wanted very much that it should be a sail, and because of the poignant hope in their breasts that it might be one, they came to think, as did the first observer, that it really was one. And then when they came to it, they found it only a tree which had been uprooted in the storm.

There have been frequent occasions in the history of medicine and pharmacy when much heralded new remedies or so-called specifics proved to be "trees" rather than the hoped-for "sails."

But, interesting as is this phase of the psychology of the delusions of the popular mind, more interesting are the psychical processes of those who, in spite of absolute proof of the existence of a thing or the value of some scientific principle or theory, refuse to accept a sail as a sail, or they accept it so grudgingly and use it, or permit its use, so sparingly or half-heartedly that the good results possible from its application are never fully realized.

For instance, the value of diphtheria antitoxin at this time is no longer questioned by scientific men and by most of the laity. The mortality-rate from diphtheria has been cut in two by its use in the last quarter of a century, and yet statistics obtained from the registra-

tion area for the past few years show that the yearly mortality in this country from diphtheria is more than 23,000. There can be no doubt that such a high mortality-rate is due in large part to antitoxin not being administered at all because of opposition to its use or objection to the cost, to its too conservative use as concerns dosage and method of administration and the fear of serum sickness, etc., or to its being injected too late to successfully check the disease-process.

There are still some prejudices to be overcome and some old ideas and conceptions to be discarded if diphtheria antitoxin is to come into its rightful place as a life saver. The specification by physicians and druggists for high-grade, concentrated, purified antitoxin (Eli Lilly & Company, Indianapolis, Ind.) packaged to meet dosage requirements and all methods of administration and at such prices as make its administration possible in even the poorest cases, will, in a great measure, assist in this readjustment.

HORLICK'S MALTED MILK

We often wonder if a more grateful food was ever put into the mouth of a sick or an invalid person than Horlick's Malted Milk. It is grateful three or even more times a day, and it is exceedingly nourishing. It contains the strength-building elements of raw milk with a degree of digestibility that raw milk does not possess.

As what we have just said is known to every physician, at least to every physician who has used Horlick's food, this note may be taken simply as a warning "lest you forget."

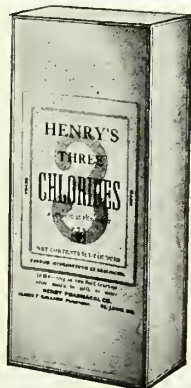
Liquid Petrolatum Squibb

Heavy (Californian)

Specially refined under our control and exclusively for us by the Standard Oil Company of California which has no connection with any other Standard Oil Company.

DURING Pregnancy and Lactation, Liquid Petrolatum Squibb will regulate the bowels and alleviate or prevent haemorrhoids without affecting the child, as it is not absorbed. Palatable, safe, no leakage, no habit.

E. R. SQUIBB & SONS, NEW YORK
MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858



THREE CHLORIDES (HENRY'S)

LIQUOR-FERRISENIC-12 oz. Bottles, Price \$1.50

Indicated in anemia and bodily weakness especially in the treatment of puny children, convalescing adults or the aged; also for girls at the age of puberty, women at the menopause and wasting diseases and debility.

SPECIAL NOTICE TO PHYSICIANS.

We will send an Original Bottle, \$1.50 size, *Three Chlorides*, to any Physician who will send us 30c. Express Charges on same. Send Coin, Stamps, Express or Money Order.

WRITE FOR BOOKLET

Henry Pharmacal Co.,

121 Vine Street
ST. LOUIS, MO.

Build up a reserve fund in a Savings Account at the

First and Security National Bank

Capital and Surplus Ten Million Dollars
Marquette Avenue at Fifth Street

We Invite You to Do Your Banking here

EYE SIGHT TESTS

ALL cases referred to me will be refracted carefully and the courtesy treated in a purely ethical manner.

K. J. KNAPP

REGISTERED OPTOMETRIST

KINDY-KNAPP, Inc.

719 Nicollet Ave.

Minneapolis.

N. W. 7038-T. S. 33929

Be Sure You Get
The Minneapolis Milk
Co's Bottling



IT MEANS PURE MILK

Milk is the cheapest and best food on the market today, and every family can save money by using two or three times the usual amount consumed by the family. ¶ A perfectly pasteurized milk is perfectly free from all harmless germs; and no other milk should be used by either children or adults. ¶ Our milk is scientifically pasteurized at an absolutely uniform temperature as applied from day to day. Every process it goes through is an automatic process, eliminating every chance of contamination. ¶ Physicians can recommend it with certainty that it meets all their demands for purity and for uniformity in the elements that make milk an ideal food, both for the well and the sick.

METROPOLITAN MILK COMPANY

T. S. 33 377

900 SOUTH SIXTH STREET

N. W. Main 2348

100% American

THE BAYER COMPANY, Inc. is controlled by the Alien Property Custodian and the manufacture and sale of its products are entirely under the supervision of **American Officers and Directors** appointed by him.

As soon as its books have been audited and the property appraised, the capital stock of the Company will be sold by the Alien Property Custodian to **American Citizens**.

All profits as well as all the money realized from the sale of the Company will be used for the purchase of Liberty Bonds to help in the prosecution of the War until the **complete defeat of Germany**.

Therefore, genuine Bayer-Tablets and Capsules of Aspirin as well as other Bayer products can be purchased with full confidence.

THE BAYER COMPANY, Inc.

117 HUDSON STREET

NEW YORK, N. Y.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, NOVEMBER 15, 1918

No. 22

THE EVACUATION OF THE WOUNDED IN THE BRITISH ARMIES, AND THEIR TREATMENT DURING REMOVAL

COLONEL GEORGE ERNEST GASK

Consulting Surgeon of the British 4th Army, Fellow Med. Sec., London; Royal Med. Soc. Gr. Brit.;
Surgeon to St. Bartholomew's Hospital, London

LONDON, ENGLAND

The Twin Cities recently enjoyed a rare treat in the visit of several European surgeons of the highest standing in the surgical world, five of whom told of the surgical work done in the war, followed by an interesting talk on what American surgeons have done, by Col. George E. Brewer, of the Roosevelt Hospital of New York.

The European surgeons were accompanied on their American tour by Col. Brewer and Col. Charles H. Mayo, and they received a royal reception wherever they went. They came to the Twin Cities as guests of the Hennepin County and the Ramsey County Medical Societies.

They spoke at the university on November 5. The speakers were introduced in a graceful and very brief manner by Dean E. P. Lyon, and each was heartily cheered.—THE EDITOR.

Ladies and Gentlemen: It gives me very great pleasure to give you a short account of our experiences. Your kind words of welcome go straight to our hearts.

I will tell you a little this morning about the arrangement of the British armies, and what is done with the wounded, in as brief a time as I can.

In each regiment there is a medical officer, and the wounded will be brought down to a regimental first-aid post in the rear of every two or three regiments. There is a regimental surgeon for each post, and this post is situated close

up to the front lines in whatever shelter can be gotten. It may be a shell hole, it may be a trench, or a pile of boxes, or a dugout; but it is the best shelter that can be obtained, in which a few patients can be collected for a short time. They are picked up as soon as possible by the regimental stretcher-bearers and carried or brought down from the regimental aid-post. Up to these centers go the bearer parties who go to collect the wounded from the regimental aid-posts, wherever they may be. From these posts patients are carried down to some place which we call an advanced dressing-station. The distance between these posts, i. e., regimental aid and advanced dressing-station, varies in length, and also as to the difficulty of the going according to the difficulty of the ground. It may be easy; it may be difficult. One I have in mind was extremely difficult; the ground was wet, and had all to be duck-boarded, and the distance varied from 1,000 to 4,000 yards. So difficult was it to carry the wounded out, that the old-fashioned way of four bearers to a stretcher had to be abandoned, and the patients were carried shoulder high. Two bearers were used to take the stretcher on their shoulders. It sometimes happened that one of the bearers would slip, and the patient be dropped. Very often the bearers were killed, and the pa-

tients would be dropped. The loss in stretcher-bearers was very great in getting patients back, being about the heaviest of any branch in the service. So you can see that the difficulties under which the medical officers had to work have been very, very great.

An advance dressing-station will be located according to the situation,—in a dugout, a farm building, or in a tent, according to the position of the ground, wherever they can get shelter. It is pushed up as far to the front line as it is safe. It is constantly under fire, but it is given the best shelter possible. In these advanced dressing-stations you will have doctors from the field ambulances—I think in your service you call them the “field hospitals.” Here the wounded will get first aid. Hemorrhage will be stopped, and urgent operations, etc., will be undertaken. Treatment of shock will be gone into, patients will be calmed by various ways, and they can also have injections of salines, blood, etc. They are given food and hot drinks.

The next thing from this line you go down to another unit which is called a main dressing-station, and from that we go to another unit which is known as the casualty clearing-station, which corresponds to your evacuation hospital. If the distance is not too great patients are carried directly from the advanced dressing-station to the casualty clearing-hospital. But often the distance is too great, the field hospital may have gone a long way ahead, and a main dressing-station is put in between. In them are collected patients from one, two, or three advanced dressing-stations, and wait there for the ambulance-carriers to come up. In this way they are collecting-stations; but they also have a separate and special function. Here are doctors who give aid in shock, transfuse blood, tie arteries, do bandaging, and remove shattered limbs. But we do not do major operations at these stations.

From the casualty clearing-station we then run by railroad the ambulance trains, which may now come up and take patients away from the clearing-stations. They are at the rail-head service. These ambulance trains take them to the base hospitals, which are more or less near the sea-coast. They are taken to the Channel, where they are put on hospital ships and taken to the base hospitals in England.

That is the chain of hospitals in British service. The chain is as follows: The dressing-stations, which are manned by the field ambulances, back to the casualty clearing-stations, where all the

surgery is done; from there to ambulance trains, to ambulance ships, and then to England. This is an outline of the transport of patients.

I will give the character of the surgery as it is at the present day. At the beginning of the war we had an idea that the surgery would be done at these base hospitals in France, and it was in the little base hospital we completed our surgery at first. Every wound arriving there contained infection; every one was contaminated and infected, and most had to be operated on. We had a loss of many hundreds of men from gas-gangrene and infections. We did not, as yet, know the game. Gradually the surgery began to be done in the different casualty clearing-stations, and gradually it came to our comprehension that we ought to do abdominal operations in them, and we started to do abdominal surgery there; and more and more it became absolutely clear that the earlier the man was operated on the better it was for him and the greater our success. Gradually we transferred the bulk of our service from the base up to the front. These have now become the most important surgical hospitals of the lot. At present the position of the casualty clearing-station is as near to the front as is consistently out of range of everything but long-range guns. These are comparatively safe. They must also be put at the rail-head. We are able to advance these hospitals only as the railroads are open. Now in these hospitals are added several surgeons and nurses, which adds to the arrangements for rapid and urgent surgery, and during times of battle and stress we have these at work as surgical teams. We have to construct the hospital where the work is heaviest.

When the patient is unloaded from the ambulance by the carrier which brings him from the dressing station, he is taken into what we call the reception-room. The clerks take down the notes on pads from which the casualty lists are compiled. Then he is taken to the dressing-room. In the dressing-room is carried on an extremely important part of the work. It is quite common to pass 500 up to 2,000 and 3,000 patients a day. It goes into hundreds and thousands. The largest number that any casualty-station has passed is between 4,000 and 5,000. It is there that the man in charge decides what is to be done with the patients. Not all patients at the stations have to go to the hospital. A small wound does not require operation. If the man is not fit for duty he is sent to the evacuation-tent. If he requires operation—and a very large number do—he is

sent to the pre-operation ward. There they take off his mud-stained and blood-soaked garments, put him into pajamas, and he is ready for the operation ward. Quite a large number are not fit for operation. If they are suffering from loss of blood, they go to the resuscitation ward or the "resurrection" ward, where we do what we can for the poor chaps.

In the operating-theater every team has one or two tables, and is a complete unit in itself—surgeons, instruments, assistants, orderlies, all arranged for very rapid work so that as little time is wasted as possible because the number of operations is very great and is always very much greater than we in our service have been able to meet. We cannot have too many surgeons in our work. It is at the front line where a man's fate is determined. His convalescence is lengthened or shortened by what is done there.

Now as to what the surgical treatment has developed into, what is done in surgery in this casualty clearing-station. Every case brought back to the base hospital in the early days was suppurating. The suppuration was horrible. We began to use all the antiseptics that we had. We used carbolic acid, hydrogen peroxide, lysol—we used every imaginable form of antiseptic. We had to go back to the methods used thirty years ago. Then gradually, in 1916, we began to do a great many more operations in a cleaner way and under aseptic conditions.

The head cases were better. During 1917 another method was developed, and was already giving signs of great improvement. This was

bismuth paste. With all of these methods there was a routine which had to be followed out: first, wound incised and all dead tissues cut away. Our present treatment is the correct treatment. The correct treatment is early mechanical cleansing of the wounds by surgical operation under aseptic methods followed by closure of the wound. The wound must be cleansed with the knife, and all devitalized tissue must be removed by cutting away. All foreign bodies—mud, stones, bullets, shells, etc.—must be removed by surgical operations so that the wound is cleaned from suppuration and contamination. After that the wound can be closed in two ways, by the late primary suture or by secondary suture. If we close a wound by primary suture the patient must be kept in the evacuation hospital for at least ten days. If he is sent away before this time by train, the shaking of the train causes a fresh flow of blood into the wound and organisms not completely removed give rise to suppuration. If we leave the wound open and protected by gauze, the surgeon of the base hospital can close the wound in two or three days. That is delayed primary suture. If that is unsuccessful—and there are such cases—then we have to resort to secondary suture. If the case suppurates, it has to be cleaned by chemical means, and the wound is sutured after ten days. The surgical treatment of the wound consists of early treatment (24 hours), and it is then closed by suture, either at once, if conditions permit, or, if not, by late primary suture, then by secondary suture.

LUNG AND CHEST WOUNDS

MAJOR PIERRE DUVAL

Professor of the Faculty of the University of Paris; Premier Surgeon of France
PARIS, FRANCE

The death-rate of lung or chest wounds, from the first dressing-station to the hospital, is calculated in the French army as 45 per cent. The same death-rate is found in the English army. The total death-rate has been calculated as 60 per cent.

Being confronted with such a high death-rate, the surgeons began to think whether it were not possible to diminish it by treating lung wounds by operation in the same way as they were treating other wounds of the body, because the evolution of lung wounds is just the same as the evolution of other wounds of the body.

It is as necessary to operate upon the lung wounds as it is to operate on wounds of other parts of the body, as just described by Col. Gask, by removing all missiles, foreign bodies, pieces of clothing, and dead tissue by large incisions, and then suturing the wound of the lung in the same way. Besides, it is necessary to close the chest wall completely.

The present operative conditions are such that we can deal with the lung in a very simple way. We do not need complicated apparatus. You can open the lung area either by high-pressure apparatus or other surgical apparatus. You can

open a large area of the thorax, pull out the lung, and then operate as you would on any other part of the body.

It is necessary to pull out the lung completely, one lobe after the other, to examine both surfaces of each lobe, and then the wound has to be laid open. If it is perforated, it has to be split open in all its length. If there is hemorrhage from the big veins, it is easy to put on a clamp, just as if it were in any other part of the body.

The present experience shows that to open largely the thorax in this way is not dangerous, neither is it dangerous to pull out the lung and manipulate it.

Now, we have before us a comparison between

lung wounds treated by operations and treated medically.

In the battle of the Somme, 1916, in 300 cases without operation the mortality was 30 per cent.

In the battle of Malmaison, in 149 cases with operation the mortality was 9 per cent.

The relief of pain by operation is infinitely superior to relief without operation.

Now, we will show the lantern-slides of cases of 1916-17 and followed for two or three months after operation.

[The lantern-slides gave vivid pictures of the extent of the lung-operations, and, in many respects, were revelations to the surgeons present. —THE EDITOR.]

LUNG AND CHEST WOUNDS TREATED BY ARTIFICIAL PNEUMOTHORAX

PROFESSOR RAFFAELE BASTIANELLI

Member of the Faculty of the Royal University of Rome: Surgeon of the Polyclinic Hospital in Rome.
ROME, ITALY

I thank you very much for your warm reception, and I thank you more for your kind patience. My argument is rather modest and perhaps in some way a little difficult to those who have not had experience. Besides, it does not follow because it does not show as a big surgical procedure that it is not good. It saves lives. You have heard Prof. Duval's wonderful results. Surely, to any surgically trained mind a complete opening of the thorax, removal of the lung, and extraction of foreign bodies appeal very strongly. It appeals to me, and I am sure it opens a broad field to the surgery of the thorax of the future. But whether to apply this complete operation to every wound of the lung or not is a question which has not yet been decided, and will not be debated by me. Let me present a different phase of the subject,—the question of handling such cases by another procedure. I will not show you what is *not* surgery but what is good. Moreover, you know this operation described by Prof. Duval is "some" operation, and requires "some" surgeon. On the other hand, it is an accomplishment necessary to every medical man to be able to successfully insert an aspirating-needle into the pleural cavity, and, indeed, the physician claims to be able to do this better than any surgeon.

Lung wounds are encountered under two as-

pects: 1st, with the thorax closed; 2nd, with the thorax open.

In the first aspect, with the thorax closed, you must remember exactly the physiological question involved, namely, that in every movement of the chest-wall, during its expansion there is exercised a powerful suction on the lung, which is so distended that the lung wound is kept open during inspiration by the negative pressure within the pleura. During this constant suction and movement of the lung the wound cannot easily close, and therefore blood is poured into the pleural cavity in greater or less amount. If the hemorrhage is large the patient may die very quickly. In many cases, however, the bleeding is small in amount, but continues slowly for many days. In these lung wounds we believe blood in the pleural cavity is demonstrable in 90 per cent of the cases. But, besides the blood, there is air in the pleural cavity which is driven out of the lung in each inspiration. This blood and air are absorbed at different rates as regards time, the air being absorbed rapidly, the blood slowly, even not for days, weeks, or months. How does nature close a lung wound? By approximating the wounded surfaces by pressure of blood or air or both within the pleural sac. Blood alone will not stop the hemorrhage, unless it is in very large amount. If in small amount the wound will never close, because the blood clots and only

partially obliterates the pleural cavity; the chest wall expands, the fluid does not follow, but the lung does and so opens the wound. So we see that nature, unaided, cannot cause a good cure.

Let us suppose, on the other hand, that the pleural cavity is full of air. When the cavity is full of air, the lung is surrounded and is collapsed totally, and is contracted toward the vertebral column, and every movement of the chest-wall acts on the air, which is elastic and is compressed very easily. The lung does not take part in this function at all. It remains collapsible. So you see the principle of our method of treating lung wounds by putting in air is advantageous in every way.

There are other cases when the chest wall is open and then you have to close it air-tight. The chest-wall is to be closed tight in any way so that you may induce artificial pneumothorax.

In the second aspect when the chest wall is wide open, the wound bleeding freely, and the shock severe, the air is sucked in in inspiration and expelled in expiration, but the lung does not function. In these cases we put in rubber bags filled with air; the man is safe, the chest wall is closed tight, and he can be transported. Study of these cases has lighted the way to treatment by artificial pneumothorax. In this method we avoid largely complications, although naturally we do have complications. The walls of the lung wound are kept closed by the pressure of "air." Foreign bodies are not removed. With any apparatus you can do artificial pneumothorax. (The speaker here illustrated apparatus devised by himself and assistant.)

The hospitals where the chest-wounds are being treated have specialists for these cases of wounds. We receive all wounded. Many die. All cases are brought in, and no selection made.

I only have time to mention results briefly. In 370 non-penetrating cases, 43 were without lung lesion and 37 with lung-lesion contusion. (Mortality not given.)

Penetrating chest wounds:

1. Closed chest and lung wound in 206 cases; 7 deaths.

Of these treated with pneumothorax there were only 88.

Of these 206 cases, 177 were cured without complications, 22 complications, like pleurisy, etc.; 7 deaths, or 3.5 per cent mortality.

The big part of the chest-wounds is made by the cases which have not the open chest.

2. Open chest and lung wounds:

84 cases.

19 deaths.

8 cases died in the first twenty hours.

76 cases which could be cured by closing the wall.

Now let me say that in these 76 cases of open-chest-wall there was adopted the treatment of using bags because my colleagues were obstinate, but they have been persuaded, and they are performing the pneumothorax. In the late cases we have had only two deaths, or 5.7 per cent mortality.

Total number of wounded, 282.

Total number of deaths, 18, or 6.2 per cent.

THE PROBLEMS BEFORE THE MEDICAL MEN OF THE ALLIES

SIR THOMAS MYLES

Royal Academy of Medicine, Dublin, Ireland; Professor of Pathology in the R. C. S. I; Many Books;
Surgeon to His Majesty, King George

DUBLIN, IRELAND

Ladies and Gentlemen: We thank you for the very cordial reception you have given us. We have had much kindness shown to us.

I do not intend to keep you very long, but wish to tell you in a few words some of the problems before us.

Since the war began, the forces fighting under the Union Jack have lost altogether 2,000,000 lives; and we have had to deal with 5,000,000 casualties. Since the beginning of the present

offensive in France under the inspired leadership of Marshal Foch, the British troops have had 732,000 casualties. If the inspiring—the wonderful success has been due to the unified leadership of Marshal Foch the hand that delivered the sledge-hammer blow has been the hand of John Bull largely. Our combined losses at the front have exceeded those of all other Allies fighting on the French front. I mention these facts to show you the immensity of the prob-

lems which confront us. I hope that you will not suffer anything like it.

The treatment of the wounded man after he is discharged from the hospital is one of our most pressing and important problems. In the early days of the war, it was considered sufficient, when a man was discharged, to send him back to his barracks; and all over the country in these depots it was a pitiful sight to see a man supposed to be doing light duty with a poor blue hand, or bandaged up and limping about on crutches. This excited popular sympathy. The ladies of highest rank protested against this neglect. It was simply due to the fact that we were unable to deal with the immense mass of wounded men. Now we have established command depots for handling wounded men after leaving the hospital. All classes of patients are sent to the command depot. It is situated on the site of a hill, generally accommodating three, four, or five thousand men. It contains a big gymnasium, and also out-of-door fields for open-air exercises suitable to their needs. All sorts of games are devised; and mechanical instruments have been constructed for exercising injured muscles.

It was part of my duty to inspect command depots all over Ireland. At first all classes of injured were sent to these depots. I found on inspection very soon that a lot of the cases sent there were quite unfitted. The function of these command depots was a grim function. The function was to get Tommy Atkins back to France as soon as possible. We had to deal with that problem at once.

We excluded all cases which were not fitted to go back to the front in a reasonably short time, and sent the others back to the hospitals they had come from, or to orthopedic hospitals which were established. By careful inspection we found men were sent down there who were being tenderly massaged by beautiful young ladies. The young lady has gradually disappeared from the scene and the unsympathetic soldier substituted in her stead. But, really, it was almost impossible to classify and catalogue cases so as to do justice to all. Since the last two years the medical officer in charge inspects every convoy and examines every individual case, excluding all not fitted to go back soon. In this way the type of cases admitted has improved and these depots are now fulfilling their function efficiently. It takes a high-class man with experience to run these depots.

The orthopedic hospitals established were of-

ficed by young men. We got young surgeons 28 to 35 years of age, and under the inspiration of Major Robert Jones these men were trained successfully at various stations established through our country. The function of these orthopedic stations is a very extensive one. We send them all cases that require operation, such as transplantation of tendons, osteotomies, and bone-grafting. What is done with the other man, the man who may be expected to be put in shape soon to go back to the front? He is first thoroughly examined and note made of his condition, and then the effort made to fit his treatment to the condition. And here it must be remembered that the Army Medical Corps does not consist of highly experienced surgeons; most of them had been engaged in civil practice, and were not skilled in the management of cases requiring orthopedic devices. Coming back to the other man: He may come in with his arm in a splint, and when it is removed he is found to have limitation of motion. First he is put through Swedish exercises, then the gymnasium. He uses dumb-bells and boxing-gloves. He is put at hand-ball. A stiff wrist is put at turning rollers. A man who has had his back riddled with shrapnel, and whose spine is weak, is put at an imitation rowing-machine. We endeavor, if possible, to use, not mechanical, but natural exercises. Natural exercises have a better effect; they affect both mind and body. We have to have the men cheered. We have the usual songs, theatrical performances, amusement halls, etc. No ladies are allowed to take part. The soldiers do the acts.

The soldiers may be classified in two groups: Those who are fit to take the field, and those who are not; those who can be made useful citizens and those who cannot. Leave out the "cannots." Which vocation will be of use to the man? what would he like? That is partly therapeutic and partly educational. You see a man who is developing a stiff knee or a stiff elbow. Sawing wood develops and loosens stiff joints; at the same time he is learning how to use a saw. In making or setting a drill, etc., the grasping with fingers soon develops nimble fingers. So that in that way we found there are two effects to be striven for, a therapeutic effect and an educational effect.

Occupation problem: When he has left the hospital and he has to be taught an occupation, he passes out of the control of the Army and comes under the ministry of pensions. This is

composed of politicians. The function of the politician is to please his constituents. So we had to educate the politician. The politician had no idea of the immensity of the problem; indeed, one said that the number of cases would not exceed twelve or fifteen hundred. From the first of July the total casualties were 732,000. There are 200,000 men now requiring treatment, and 2,000,000 men will be requiring treatment, and the whole process is still in the egg stage, and I think the egg is getting addled. The 4,000,000 men will see that justice is done to their comrades.

There is just one other question. You have to select commanders for these various camps. The type selected at first was used to the ordinary soldier. He was a country gentleman who had left the army about twenty years before, been put into service again, and was familiar with the old routine, and followed it out. That type was the only man available. We have now found a different type of commander; we have found the

only man fit is a medical army man. You people in this democratic country must insist that all reconstruction work must be wholly and entirely in the control of Army medical men. It is an entirely therapeutic function. It is quite comprehensive that that is the first thing. This man need not necessarily be a great scientist. He need not be a pathologist. He has got to be a sport and understand human nature and know how to play games, and have sufficient intelligence to select for the soldier what kind of gymnastics is best to put him back in the field. That is here known as "horse sense."

Now, secondly, you want a curative hospital. In this hospital you want a man of mechanical knowledge, a knowledge of machinery, handicraft, etc. He must be a fairly young man. You have to select a man who possesses some knowledge of mechanical appliances. You will probably have no difficulty in finding suitable men.

I offer you profound thanks.

WHAT THE WAR HOSPITALS ARE DOING IN EUROPE

COLONEL GEORGE E. BREWER

Professor of Surgery, Columbia University, College of Physicians & Surgeons; Surgeon at Roosevelt Hospital,
NEW YORK CITY

What are our medical men doing over there, and under what conditions are they working? That is a topic which you would all like to hear about. During the seventeen months I served I spent seven months with the British, and the rest of the time with our own service, partly serving with one or two of the French armies and partly with our own.

I will not go into the question of the duties or the experiences of the regimental surgeon, because that would take too long. I realize that the regimental surgeons are meeting the most severe conditions. They are largely under conditions least agreeable, at the same time doing surgical work. Also I will say nothing as to the duties of the various staffs,—the sanitary staff, and the medical men who have to do with preventive medicine, contagious diseases, prophylactics, gas-protection, etc. All of these have important work to do. My experiences are mainly with the hospital side and the work which is being done there.

The hospitals of all armies are divided into

those of the rear or base and those in the front area. We have three main types of hospitals. A base hospital of from 500 to 3,500 beds, averaging 2,000 beds. It is situated well behind the lines. The patients are brought in large convoys, and carried by rail and hospital trains. I will describe the work in the British base hospital where I work, since base hospitals are all about the same.

There is the daily routine work. We receive patients once in a week or two weeks, by hospital train or two trains coming at the same time, never less than 350, and at most 500 or 600 cases. These patients have been through a casualty-station or a main hospital, and for the most part severe cases have already been operated on. Many may not be touched, during some rush, and there may be a large number of cases of compound fracture, abdominal wounds, head wounds, or peripheral nerve infection, which have to be taken care of. First would come a telegram, "There will be a company of so many officers, etc." We would call our staff together and consult. If we

did not have enough beds, we would have to put stretchers on the floor. When the convoy arrived we would have bedding enough. Sometimes we have many hundred on the floor.

Well, two o'clock in the morning comes, you go to the station; the trucks line up, patients going out, surgical officers stationed. There are three or four stretcher-bearers. The piles of blankets are seven feet high. The commander of the train speaks to the director. As the wounded pass out, the medical officer asks whether sick or wounded, and states to what ward each is assigned. It was all so well arranged that in an hour and a half after the train came in we would have all patients put away in the hospital, and the train would be moving out. Here we had a hospital of 1,700 surgical beds. During ordinary times we attend 1,000 or 1,200.

Next would be feeding time. Then the entire staff would start to dressing wounds. Three or four operating-rooms would be opened, and very often, when many surgical cases were brought in, operating would go on for several days. Following these occasions there would be quiet periods, with only dressings or an occasional operation. We might have several afternoons a week for recreation. The man at the base lives a rather attractive life, with good food, good bed, periods of hard work, periods of recreation. As a rule, they are not disturbed at all. Sometimes there is a visit from aviators which will disturb the hospital, but it is quite unusual. For the most part this life is very comfortable.

The front area is quite different. Here we are close up behind the lines. There has been no quiet area since I have been there. If the casualties varied from 20 to 60 per day, they called that quiet. During that period we had the evacuation-hospital, which takes a whole area. There are also the field hospital, gas hospital, hospital for contagious diseases, and camp hospital for lightly wounded or severe cases. Those are the divisional hospitals, and they do a certain amount of work.

An evacuation hospital is a real hospital. It is supposed to be equipped as well as any hospital in Minneapolis, Chicago, New York, or elsewhere. It takes several buildings. It is very well equipped, and has a regular hospital staff which contains three or four good hospital teams and also other teams, even up to 16, 18, or 20 teams. These surgical teams are the ones that do the bulk of the surgical work. The evacuation hospitals are moved up into active area.

They must be on a rail-head. They must be where you can evacuate many cases a day as the others come in. They must be where the hospital trains can come at any time. The hospitals are a good ways from the main line. The remainder are not very near the line. We had three large evacuation hospitals at the Chateau Thierry battle. Because the next drive might rapidly carry the enemy far forward the evacuation hospital had to be placed where it could be moved back quickly. You will appreciate that there are a great many severely wounded cases, such as compound fractures, etc. Such cases cannot be long delayed before having surgical attention. So we had to create what are called "transportable" hospitals. We sometimes speak of them as advance operating centers. We have what we call the movable hospital unit which contains about 16 medical officers, 22 nurses, 100 to 250 beds, complete sterilizing and x-ray apparatus, and as complete a surgical outfit as it is possible to have in any hospital. These are in tents, and the tents can be folded up and taken on trucks to wherever they are needed in a very short time. It takes about eight hours to be made ready from the time it reaches the spot. One can be taken down in about three or four hours. These are advanced operating centers. We had only two such units in France at the time of the Chateau Thierry offensive. Now we have a lot of them, and there are a lot more coming in all the time. They were needed badly in the Chateau Thierry battle during a strong counter attack, which was unexpected and which naturally resulted in a large number of casualties. The hospital has improved. Each division has four field hospitals. One of these is taken near the line, additional tents put up which are furnished by the field hospital, and there are several teams with an x-ray plant, surgical supplies, etc. Marshal Foch did not go around and tell people he was going to make an attack. We had to convert the field hospital into an advanced operating center. That is the reason the work is so difficult, and why we found it necessary to use our ambulances to the fullest extent to clear the way.

Now, just a word about the evacuation hospital. It is situated on a railway. It may be several miles or ten or fifteen miles from the line. It is a hospital where the great bulk of the operating is done. At first we had three, now we have eight, and each is capable of taking care of 1,100 beds. Even so, the number of wounded men was

so great that we found it was impossible, even with 18 teams, to care for all the wounded, so we had to put them on hospital trains and send them to base hospitals for treatment. We had to do that as we had to in all battles. No one can foretell how many casualties there will be. You may have enough for one day, and later be overwhelmed.

I want to call attention to the fact that the work done is of a very high order. It has to be. That is the place that the men come with the worst type of wound. Of course, the worst is a fracture of a large bone. You may have patients with as many as six conditions that require operation. Many may be in condition to have one or two done, but not all. Now, the question is, which one? One such patient was shocked so badly that he had to be taken to the shock ward. Here he was given stimulation injections. He had a wound of the abdomen, a compound fracture of the thigh, and a chest wound. Naturally, you can not operate on all of these at one time, and get away with it. He may be able to bear a twenty-minute operation. I elected to operate on the abdomen first, as this was the most threatening. We must do the one thing that is proper at the moment. He was given quickly an anesthetic. In twenty minutes the abdomen was opened and his wounds repaired; and then he was sent back to the shock room. There was danger that the other wounds might become infected, but in forty-eight hours he had not developed gangrene, and we mended the compound fracture and cleaned up his other wounds, and he recovered. Good judgment was required.

I remember that in the Chateau Thierry district I happened to be alone as consulting surgeon on that corps. The thing that impressed me more than anything else was to see eight or ten tables, with teams working at every table. You would see in every tent men of national reputation working at the tables and giving our boys the very best they could. Many wounded men were brought in late, some severely wounded, and in some cases infection had already started. It was my privilege to go through several hospitals and get statistics. How many got gangrene? How many wounds were you able to close? How many fractures did you have to amputate? These were the questions asked. It was most gratifying to find the surgical results we got. Out of the large number of casualties in that battle, the available base hospital closed about 35 per cent or 40 per cent of their cases by delayed primary

union or secondary union; and the number of cases of gas gangrene was very small—I think there were only 22 cases I was able to check up, and only 11 died. The mortality-rate did not go up as I expected, although it was in a very bad gas-gangrene area. I think we have mighty good surgery in the front area.

In the front area you will live under uncomfortable conditions most of the time. The food is not good, for it is a devastated area, with few farmers in the neighborhood, and you cannot buy anything from them. Your mess is sometimes not exactly what you would like. We officers got in such a place one night. We asked where the officers' mess was, and found there was none. We had no supplies, so we had to go to the Y. M. C. A. We went into a little barracks and found a most uncomfortable seat on a wooden bench. We got cold pancakes with grape jelly and awful coffee. We moved up into Chateau Thierry for a while. In such case we simply take any house we happen to see. During those days we got a piece of moldy bread and some rancid butter and bitter coffee, and after a while some oatmeal, canned salmon, and mashed potatoes. Most of the time, however, we had a very good mess.

The dangers to medical men are not great, but occasionally they are where it is very uncomfortable. The British had their casualty clearing-stations very near the line. We were from three to four miles from the line. Not being accustomed to cannonading, I thought it must be pretty near. The number of explosions was 150 to 200 per minute. I heard the whiz of shells going overhead that were aimed at army headquarters a mile behind us. We did not mind because they were not shooting at our hospital. We knew they could not find us. Whenever airplanes went over we would look up. It was a very interesting sight until we saw they had gotten by, then we turned in. We were perfectly quiet and not feeling worried until one time there was an explosion right outside our tent and a great cloud of dust. A man came running up to me and said that the nurse had been wounded, had a piece of shell right through her eye. Three British nurses were wounded, and one man was blown to pieces. There were fifteen casualties at that clearing-station, with nine bombings in two days. They had been going over every day. These hospitals were plainly marked, and had been permanently placed for from six months to two years; there could have been no mistake. The enemy did as they always did in reverses, took it out either on

civilian population or hospitals, and this time it was the hospital. The hospital about 200 yards from us had had an airplane drop shells in its midst, 66 being killed, and the rest wounded. Another hospital where Dr. Crile was acting as head surgeon, had 70 casualties. Dr. Crile rushed in to get his own helmet, rushed out, and a shell fell at the spot where he had been a moment before. So that when you take the nine hospitals that were bombed, the losses amounted to between 300 and 400, and that was all *deliberate* bombing of hospitals that could not get away. The Presbyterian Hospital unit in New York, headed by Dr. St. John, had an exciting experience. The wounded were being brought in rapidly, when suddenly the hospital was bombed by long-distance guns. All men and women kept at work and all stuck to their jobs under bombardment until finally we had to get away. I want to say that in all my life I have never seen more perfect self-control than was displayed by those women at that time.

The next day, when we moved back, these same women also returned, and continued to serve in that same hospital, together with a lot

of other courageous and splendid women. The next night the Boches came back. They flew so low that the tents were torn, and not being satisfied with that they came back the night after, and turned the machine-gun right through the entire length of the hospital tent. There was, fortunately, no one in the tent. But then they flew to the next hospital where there was a heavy casualty list. This he did several nights in succession with a machine-gun.

Our people who are going over there, both nurses and doctors, are giving 100 per cent of the best they can to our people; and we want some more doctors, nurses, and enlisted men. Our soldiers are entitled to the best. They go to the line, and are shot to pieces. They do everything to give us victory, and it is up to us to give them the best when they are wounded, and I am very happy to say that, so far as we have seen, the American army are getting the best that can be given. It is as perfect as it is humanly possible to make it. But we may not have enough doctors, and at Washington they are doing their best so that they can have an over-supply.

THE CAMPAIGN IN MESOPOTAMIA

MAJOR G. GREY TURNER

NEWCASTLE-ON-TYNE, ENGLAND

[Major George Gray Turner presented lantern-slides illustrating scenes in Mesopotamia and the campaign conducted there. These were of

great interest, but of course are not available for this report.—THE EDITOR.]

THE USE OF THE BLOOD OF A CONVALESCENT PATIENT IN THE TREATMENT OF INFLUENZAL PNEUMONIA

PRELIMINARY REPORT

By JOHN M. LAJOIE, M. D.

MINNEAPOLIS

Specific measures are not available in the treatment of influenza. With certain identification of the causal agent, we may hope for some specific protective measures, and perhaps for some specific therapeutic serum. In the absence of a specific virus to be used in immunizing animals, there remains but one source of a therapeutic serum at the present time. This is in the blood of persons recently recovered from the disease. It is quite probable that the blood of convalescent patients contains antibodies for the specific agent of the disease. It would be desirable to inject citrated convalescent blood into the muscles of patients with pneumonia at least. Naturally such blood should be known to give negative Wassermann reaction. In view of the strikingly beneficial results from convalescent serum in scarlet fever secured by a number of observers, it seems reasonable to try this in influenzal pneumonia, especially as it is devoid of any harmful effects.¹

The foregoing suggestion appeared so reasonable and very practical that we decided to give it a trial in a patient who was acutely ill with a right-sided lobar pneumonia complicating influenza. The following is the report of the case:

Miss U., No. 5609, age 22, developed a typical attack of influenza on October 2, 1918. She had the usual symptoms of headache and backache, accompanied by general soreness, also a mild conjunctivitis with photophobia; maximum temperature, 103°; pulse, 136; respiration, 22 per minute.

October 7, 1918. Her temperature had been down to 101°, and today it began to rise; maximum, 103.4°; pulse, 130; respiration, 36.

On physical examination there was found a small area of bronchial breathing in the right chest, posteriorly, just below the scapula. This was surrounded by a few fine moist râles.

October 8, 1918. Pulse, 136; maximum temperature, 104.2°; respiration, 48.

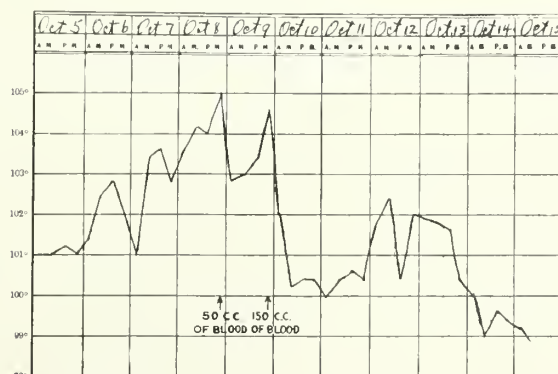
The patient was very ill, and there was present a moderate degree of cyanosis and muttering delirium; white-blood count, 3,600; differential,—polymorphonuclears, 76; large lymphocytes, 19; small lymphocytes, 3; mononuclears, 1; transitional, 1.

An individual was selected who had recently recovered from a severe attack of uncomplicated influenza, and whose temperature had been nor-

mal for four days. She had no evidence nor past history of any chronic disease, such as syphilis or tuberculosis; and her blood was in group two, the same as that of the patient. I obtained from her 50 cc. of blood, and injected it by the citrate method, 25 cc. into the muscle of each thigh. There appeared to be some improvement following this procedure.

October 9, 1918. Pulse, 120; maximum temperature, 104°; respiration, 48. The patient seems more acutely ill this afternoon than at any time. There are marked cyanosis and very difficult breathing. The second pulmonic tone is becoming distinctly weaker. The systolic blood-pressure is 105; the diastolic, 55. Again we obtained 150 cc. of blood from the individual used on the previous day; and this time we injected the blood intravenously, as one would do a medical transfusion by the citrate method. Just before introducing the blood, 250 cc. of the patient's blood were removed, as we felt it might not be wise to increase the blood volume when removal of some blood seemed indicated.

October 10, 1918. Pulse, 124; maximum temperature, 100.4°; respiration, 48. There is considerable improvement in the appearance of the patient; breathing is much more free; cyanosis is reduced materially. The patient is bright, and seems very comfortable. (See temperature curve.) White-blood count 5,300; systolic blood-pressure, 92; diastolic, 60.



While the area of consolidation in the right chest is increased materially in size by this time,

1. Jour. of the Am. Med. Assn., October 5, 1918.

coarse bubbling râles about the periphery of the consolidation are beginning to appear. There are also a few moist bubbling râles in the left chest, posteriorly.

October 11, 1918. Pulse, 130; temperature, 100.4°; respiration, 48. The patient's condition is about the same. Systolic blood-pressure, 100; diastolic, 62.

Urinalysis: specific gravity, 1025; albumin, moderate amount; sugar, none; hyaline casts, few; granular casts, numerous; pus, moderate amount.

October 12, 1918. Pulse, 120; temperature, 102°; respiration, 40. The left chest is clear, while the right chest shows numerous coarse bubbling râles posteriorly, as well as anteriorly.

October 15, 1918. Pulse, 100.4; temperature, 99°; respiration, 34; systolic blood pressure, 94; diastolic, 62; white-blood count, 10,300.

The patient feels very comfortable today, has no evidence of cyanosis, and the right chest is practically clear except for a few moist râles heard posteriorly at the angle of the scapula. There is every evidence at this time that the patient will make an uneventful recovery.

The very striking beneficial results in this case

following the procedure described above suggest the possibility that in the serum of patients who have recovered from influenza we have antibodies for the specific agent of the disease.

I am anxious to hear of results obtained by other observers who may be interested in doing such work.

SUMMARY

1. The simplest manner of transferring serum from a convalescent individual to a patient is by blood-transfusion, using the non-surgical citrate method (12 cc. of 1.5 per cent sodium citrate solution per 100 cc. of blood). It seems more desirable than the introduction of blood in small amounts into the muscles.

2. The procedure is devoid of any harmful effects when one uses the ordinary precautions of blood transfusions.

3. It appears that the amount of blood used should not be less than 200 cc., and this amount may be repeated if necessary.

4. The measure should be used early in the disease, especially if any signs of pneumonia develop. It may not be required in patients who have a mild attack of influenza.

TRIPLETS: AN INTERESTING CASE

By J. S. WALDNER, M. D.

PARKSTON, SOUTH DAKOTA

The patient was a primipara, aged 21.

I was called at 12:30 p. m., and upon abdominal palpation found one head in the upper left half of the uterus, and one in the lower part. Vaginal examination showed that one head had engaged, l. o. p. The cervix was dilated to three fingers. The pain was continuous.

I gave the patient 1 c.c. pituitrin, and the pain increased, but no progress of labor occurred. A

half hour later I gave another cubic centimeter of pituitrin, and again the pain increased, but there was no progress of labor.

At 4 o'clock I applied forceps, and delivered a girl; the second, a girl, was a breech delivery; and the third, also a girl, was a forceps delivery.

The mother and three daughters are doing well.

Who will doubt the patriotism of this family?

THE JOURNAL-LANCET

Represents the Medical Profession of

Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the

North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.

H. J. ROWE, M. D. - - - Casselton, N. D.

H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

NOVEMBER 15, 1918

AFTER THE ARMISTICE WHAT?

We cannot answer the question we have asked, a question which all the physicians of America are asking; but we can give our readers a significant fact suggesting the answer.

The other day the Personnel Board of the Y. M. C. A. in New York sent a form letter to the men in this country who have volunteered their services, and have not yet been called abroad. This letter was called forth by the evident impression that the approach of peace would make upon these men, and further by the increased knowledge on the part of the Board of the pressing needs of American help in Europe.

Here is a significant paragraph from that letter:

This message is to assure you that the changing military conditions overseas promise a larger and even more important work for the Y. M. C. A. We are in receipt of a most urgent cable to send at least 5,000 men as soon as possible. The situation in France is critical for lack of men. Don't let anyone persuade you that the need for men is one whit less than when all military fronts were active.

If the need of laymen is so urgent, what must be the need of physicians? The profession must gird itself for the task before it.

DOCTORS, NURSES, AND INFLUENZA

Medical men and their aids, the nurses, have greatly suffered in their ranks through sickness

and death arising from the epidemic of influenza. In many country places where influenza is more prevalent, in proportion, than it is in the cities, the doctors and nurses have been overworked and have contracted the disease themselves, and a comparatively large number of them have died, so that the vacancies caused by death rank second in number to the vacancies caused by the demands of the medical service. This is due largely to the virulent cases, and to the difficulties in caring for patients, and the difficulties in getting nurses, as well as the probable frequent exposure of both doctors and nurses. Of course, many physicians and nurses have been sick with influenza and have recovered, but experience in this epidemic shows that the recoveries are very slow, and that both doctors and nurses have bronchial coughs which last for a number of weeks, and some of them are destined to last for a number of months. It seems quite reasonable to assume that many of the victims become reinfected from exhaustion, tire, and repeated exposures.

The number of deaths among physicians, of course, is not very large in Minnesota, but a sufficient number have died to make an impression upon the entire profession. One only has to read the obituary column of the *Journal of the A. M. A.* to see the large percentage of deaths recorded there which have been due to influenza or to pneumonia following influenza. A great many physicians go about among their patients with no thought of themselves. Some of them are indifferent, and others are grossly negligent, and do not protect themselves in any way. They neither wear gauze masks, nor require their patients to do so, and it is quite natural that the man who is in close contact with his patient and looking for the physical symptoms in the chest, must, in some way, inhale a large number of germs, and, if he happens to be in a receptive mood, he becomes infected. It is time for all doctors, including health officers and other health workers who think themselves immune, to use the greatest precaution against contracting the disease, and the only real precaution is in the avoidance of tire and of the careless contact with the patient's breath.

There seems to be no remedy that is reasonable or safe for the cough of influenza. Cough mixtures, of course, are worthless. They are swallowed directly into the stomach, and do not even stop to bathe the mouth, throat, or pharynx; and even if they did it would be simply a temporary relief. Nor is it fully safe to indulge in

the use of narcotics, because they again beget trouble, and very frequently fail to relieve the sufferer. The remedy seems to lie in plenty of outdoor air, warm clothing, an abundance of food, and the use of hot packs and cold compresses, together with time. The tire and exhaustion and lack of strength which follow influenza present a baffling problem often, and the average tonic seems of no use. Strychnia in fairly good sized doses (one-twentieth of a grain three times a day, and more often if necessary) seems to be the most effective, and the combination of iron and quinine is a good adjunct.

While the call of the country is so insistent for nurses, we who are at home must consider the people under our protection, and must have reasonable and adequate means for the care of our patients. It seems that many of the registered nurses are doing their duty elsewhere, and not infrequently we have to rely upon the so-called practical nurse. She needs a large amount of instruction in the regularity of her work and habits, as well as in the protection against Pfeiffer's bacillus.

PROPHYLACTIC VACCINES

Very naturally, the influenza epidemic has brought out a large number of cures, among them being the various vaccines that are prepared by reputable physicians for use at this time. The result is that the manufacturers have gone into the same line of business, one might say, and have put upon the market a vaccine which they consider invaluable, and herein lies the danger of overdoing a thing. It is reported in the daily press that two physicians have been touring North Dakota claiming that they were using Rosenow's vaccine, and were qualified to administer it as a prophylactic against pneumonia. It is quite probable they reaped a large harvest from their endeavors, but they were discovered and discouraged. This same method has been adopted in the cities, as well as in the country, and physicians are using large quantities of anti-pneumonia vaccine without any knowledge whether it will do the work that it claimed for it.

Some men either have a great deal of faith, or a great deal of courage, or a highly developed business sense when they offer their prophylactic injections against pneumonia to people who are in good health, provided a certain sum of money is paid, ranging anywhere from two to five or eight dollars an injection. It is reported that some men in the cities have given injections to

a large number of people in order to prevent them from having pneumonia. This sort of business enterprise is not usual, but we find it springing up from time to time, particularly when a certain fad or cure is to be promoted. We all recall the Friedman tubercular serum. Fortunately, the man who presented this serum, which was worthless, had his products and methods scrutinized by a scientific body under the direction of the United States Public Health Service, and it was soon found that his claims were entirely fraudulent and useless. So it may be with the vaccine which is offered as a prophylaxis against pneumonia. This is not to say there are no good vaccine made, because it has been demonstrated that the vaccine made at the University under Dr. W. P. Larson, Professor of Bacteriology, is by a new method of preparing the strains of streptococci and pneumococci. Isolated from fatal cases of pneumonia due to influenza, Dr. Rosenow, of Rochester, Minn., makes a vaccine which is unquestionably made under safe and scientific methods, but no one knows actually what this vaccine will accomplish, and it is rather unfortunate that it should be used for commercial purposes, because the University of Minnesota distributes vaccines free to any physician in Minnesota. The doctors who administer the vaccine should not charge for their services, but it should be given free and with the full consent of the patient, the patient taking the responsibility. It is difficult to imagine such a Utopian state of affairs in this commercial age, and the men who are using free vaccine and charging large prices for its introduction, are not practicing medicine in the proper spirit. They are commercializing themselves and their free product. If the influenza vaccine or the antipneumococcic vaccine are standardized as are antitoxin serum, typhoid, and paratyphoid vaccine, there would be no hesitancy in their use and in making a charge for its application, but, at the present time, it seems unfair that the people should be subjected to this sort of thing until we know more about it.

The *Journal of the A. M. A.* has an excellent editorial in the issue of October 26, stating that these are purely experiments,—that is, the use of vaccines for these two diseases, influenza and pneumonia.

The claim is also made that the injection of vaccines is harmless. That, of course, is not borne out by facts. Even in a city the size of Minneapolis, opportunities have been offered to demonstrate the harm which these injections may do.

For instance, in the hospitals in Minneapolis the superintendents, although they do not oppose the vaccination of internes and nurses, do not urge it or advise anyone to be vaccinated without his full and free consent and with the assumption of all responsibility. It has been further demonstrated that the doctors and nurses who have tried the experiments, and who have received two injections, have suffered from influenza, just as those who are not inoculated; consequently no reasonable or rational claim for certainty of protection can be made. Some of the patients who have been operated on have not only been made sick, but have suffered extremely from sore arms. Even when a good many people who have been vaccinated do not contract influenza or pneumonia, there is nothing to substantiate the claim that they were made immune by the vaccine. The men who have studied the subject from a laboratory point of view, find cocci of various sorts more frequently than they find Pfeiffer's bacillus; hence we should exercise more care, reason, and conservatism than has been done heretofore, and by all means keep away from the commercial side of this method of treatment.

VITAL STATISTICS IN MINNESOTA

The report of the Division of Vital Statistics of the Minnesota State Board of Health for the quarter ending September 30, 1918, contains both interest and instruction for medical men, not only in Minnesota, but in all states, particularly in Western states that are not in the registration area.

We call particular attention to a few vital facts shown by the figures in these reports:

In the year 1900, when the state had a population of 1,751,394, the number of deaths from tuberculosis was 1,864. In the year 1917, when the population was 2,312,445, the number of deaths from tuberculosis was 2,275.

The gradual yearly increase in the population and in the number of deaths during the period of eighteen years is evidence of the accuracy of the figures.

Now, the increase in population from 1900 to 1917 was, in round figures, 40 per cent, while the increase in deaths from tuberculosis was only 22 per cent, which shows an exceedingly gratifying condition.

With the largely increased agencies for fighting this great plague, we may rightly infer that the next decade or two will show even a greater decrease in the percentage of deaths; and this

certainty of reward for all efforts put forth by those devoting time and energy to the complete control of the disease, can but hearten all engaged in the work.

The number of failures by physicians to register, either promptly or at all, births and deaths, is still too great; and the number of certificates of death that are inadequate as to the cause of death, is also too great; and not infrequently a certificate seems to show that the attending physician did not know the condition of the patient with sufficient clearness to enable him to treat the case intelligently.

A table showing the number of deaths from preventable causes furnishes food for serious thought. If physicians would exert their influence for the removal of the causes of such deaths, the conservation of human life would soon offset the waste of life in the world war.

The work of the Division of Venereal Diseases has been pushed vigorously, and in directions that indicate that immeasurable good can be accomplished. While the Division's work is almost wholly pioneer work, it has progressed far enough to show that definite ends are sought and are attainable. For instance, the sale of remedies for venereal diseases by druggists can be broken up; clinics can be made to attract men and women; the victims of social diseases can be made to register and can be prevented from being carriers; and the public can be reached for educational purposes full of promise.

The co-operation of every practitioner of medicine in every state is needed by his state board of health, and it should be freely and cheerfully given; anything short of this is unworthy a medical man.

THE ONLY ETHICAL ADVERTISING FOR A PHYSICIAN

The strongest and perhaps the only unanswerable argument that can be advanced to a non-prohibitionist why he should vote for the prohibition of the manufacture and sale of all spirituous drinks, is the duty of self-sacrifice in behalf of others. The argument is unanswerable because the great and ruinous cost of the abuse of such drinks is indisputable.

For the same reason, all reputable medical men refuse to adopt methods of making themselves and their attainments known to the lay public by methods commonly designated as "advertising."

The lay press will not—indeed cannot with

any degree of sincerity or sanity—deny the self-evident truths set forth in the above two paragraphs; and yet a large proportion of the editors who are, in any way, related to the publishers of the journals constituting the lay press, will not acknowledge the latter truth, but will continue to ridicule physicians who will not use their columns, at fixed monetary rates, to advertise themselves. It is only the restraint of this well-nigh universal rule among physicians that prevents the use of the daily papers, in the form others use paid-for space, by many physicians.

But there is a legitimate and an ethical way for physicians to advertise, and to its success in his own case the late Dr. J. E. Moore, of Minneapolis, often gave free testimony. Dr. Moore was one of the first men, at least in the West, to practice surgery exclusively; and he often said to the editor of *THE JOURNAL-LANCET* that he attributed his professional advancement to the frequent and legitimate contribution of papers to the pages of this paper. Dr. Moore wrote good articles, and he did so because he was unsparing of time and effort in their preparation. He was always a student; and this, with his devotion to his specialty, and because of several trips abroad when the best surgery was done mainly in Europe, enabled him to make valuable, even though they were not strictly original, contributions to the general knowledge of the Western profession, at least.

It should also be said that Dr. Moore did not abuse this means of making himself known, as too many specialists do today. He never boasted, as some men brazenly now do, of the *number* of papers he wrote, or was requested to write, in a week or even a month.

MISCELLANY

MEMORIAL TO DR. JAMES E. MOORE

BY THE ADMINISTRATIVE BOARD OF THE MEDICAL SCHOOL, UNIVERSITY OF MINNESOTA

Another pioneer in medical education in the State of Minnesota and almost the last of the members of the original faculty of the Medical School of the University of Minnesota, Dr. James E. Moore, has passed on.

His death is deeply lamented by his fellows. They desire to record their keen sense of the loss of their old and tried friend and associate

of so many years. They testify to his comradeship and constant co-operation; to his unfailing interest in the students he helped to train; to the inspiration he has been and the guiding-hand that he has given to young men in the profession; to the integrity of the surgical ideals for which he stood; to the rare success he realized as a teacher of surgery; to the large part that he has played in the making of medicine in the state and in the making of history in this school; to the long and faithful service he has rendered to the University of Minnesota.

In his life he lived the gospel of good work. At its close, with rare philosophy, he looked back, content to have lived so long and so happily, to have had so large a share in the world's work; and, "sustained and soothed," and beseeching his friends not to think of him sorrowfully, he "approached his end, as one who draws the draperies of his couch about him and lies down to pleasant dreams."

His old associates salute the brave spirit that has departed, and offer their sympathy to his family in their bereavement.

E. P. LYON, *Dean*.

RICHARD OLDING BEARD, *Secretary*.

THE RAMSEY COUNTY (ST. PAUL) MEDICAL SOCIETY AND THE INFLUENZA

The attitude of a medical society like that of St. Paul toward city regulations for the arrest and stamping out of such a disease as the so-called Spanish influenza, is of special interest; therefore we give the resolutions adopted by the Ramsey County Medical Society. It is, of course, necessary to add what effect the resolutions had upon the St. Paul health authorities and the Citizens' Committee which had under consideration the steps necessary to be taken in the warfare against the epidemic, especially as regards prohibiting public meetings, including schools, churches, theaters, etc.

The health officer, Dr. Simon, has prohibited all such assemblies, as did the health officer of Minneapolis some weeks ago.

Here are the resolutions, whose wisdom or lack of wisdom cannot now be determined by any man or group of men:

As a medical body, the Ramsey County Medical Society recommends to the Board of Health and the public the following:

First—Strict isolation of influenza patients, preferably in a properly equipped hospital, when a trained nurse at home is not available.

Second—The establishment of a six-foot zone of contact, namely, that in a gathering of any kind, individuals shall be kept at least six feet from one another.

Third—Universal adoption of a mask covering the nose and mouth, the mask to be properly sterilized by boiling at frequent intervals.

Fourth—Universal free vaccination against the pneumonia complicating influenza, with the vaccine distributed by the State Board of Health.

SOUTH DAKOTA'S ATTITUDE TOWARD THE INFLUENZA

Dr. P. B. Jenkins, superintendent of the State Board of Health of South Dakota, issued the following instructions:

Every legally qualified physician in South Dakota is hereby appointed, authorized and required to actively assist in the fight against and control of influenza.

You are required to—

(a) Report your cases daily to this office by wire collect. The only information wanted is number of cases, locality and deaths.

(b) Close all public schools and prohibit public gatherings at points where influenza appears in epidemic form. One per cent of population is sufficient grounds for this action.

(c) Notify this office by wire when and where schools are closed.

(d) Disseminate literature and use newspaper publicity and other means of instructing the public as to the proper precautions to be taken.

(e) Funerals of deceased soldiers, where death is caused by influenza, should be held in the open air. Open air funerals in civilian cases at points where influenza is prevalent should be held.

PROPHYLACTIC VACCINATION AGAINST PNEUMOCOCCUS AND BACILLUS INFLUENZÆ

The Acting Surgeon General has issued the following suggestions to Army Surgeons and others in charge of the health of the army in this country:

1. The value of vaccination against certain of the more important organisms giving rise to pneumonia may be considered as established by the experiments of Lister in South Africa, and by the more recent results of prophylactic vaccination in our own Army.

2. In South Africa during the last four years, Lister has given prophylactic vaccination against the three most important types of pneumococcus there prevalent. In this period not a single case of pneumonia due to a pneumococcus of the types used in the vaccine has occurred among the vaccinated individuals, each of whom has, as a rule, been under observation for about nine months following the vaccination.

3. In our own Army vaccination was given last winter as a prophylactic measure to half of one Division, using a vaccine containing pneumococcus Types I, II, and

III. During the ten weeks from the period of vaccination until the troops went overseas, pneumonia due to these types of pneumococcus did not occur at all among the vaccinated troops; whereas, among the unvaccinated it occurred a trifle more frequently than in the period before vaccination.

4. The Army has now available for all officers, enlisted men, and civilian employees of the Army, a like vaccine containing pneumococcus Types I, II, and III. The dose of this for prophylactic use is 1 c.c., given subcutaneously and a single injection suffices. The reaction local and general is about comparable with that following typhoid vaccination; as a rule, rather less severe.

5. In view of the possible etiologic importance of the bacillus influenzae in the present epidemic, a saline vaccine has been prepared by the Army and is available for all officers, enlisted men, and civilian employees of the Army. The effectiveness of the bacillus influenzae vaccine as a prophylactic measure in controlling the epidemic must be considered as still in the experimental stage. Being a saline vaccine it is probable that more than one injection will be required to obtain maximal protection. It may be given at the same time as the pneumococcus vaccine in the opposite arm. The reaction local and general of this vaccine is extremely slight.

6. These vaccines may be obtained from the Army Medical School, Washington, D. C., on requisition made directly to the Commandant, by letter or telegram.

7. As these vaccines are now available for prophylactic use and are prepared by standardized methods, and as in the case of the pneumococcus vaccine, the proper dosage and the protective efficiency have been established by the investigation conducted by the Army, the vaccines obtained from the Army Medical School will be employed in the future in the Army when pneumococcus or influenza vaccines are desired, to the exclusion of any other vaccines prepared from these organisms.

8. It must be understood that vaccination against influenza and pneumonia is not compulsory, and should be given only with the knowledge and consent of the individual.

KINDLY AND APPRECIATIVE WORDS FROM THE FRONT FOR WORKERS AT HOME

Upon receipt of over fifty boxes of supplies sent to the hospital unit from Bismarck, N. D., which had been long delayed in transit, Col. E. P. Quain, organizer and head of the unit, wrote to his wife the following words to tell how thankfully the men and women of the unit at the front in France received them:

It would do the hearts of the good women of Bismarck good to see how comfortable our Yanks are in the garments their loving hands made for our boys over there. The boys come in from the battlefield by the trainload, wounded, dirty and weary, and we have clean, comfortable hospital garments for every one of them. Our Bismarck women would feel repaid many times over for their painstaking labor if they could hear the expressions of appreciation which come from the very

hearts of these boys. There is an abundance of everything, and everything came through in perfect condition.

The Bismarck Surgical unit was provided with all manner of hospital supplies for the care of 250 patients. This was the first Red Cross work done in Bismarck. The supplies for the section were completed and boxed a year ago last spring. When the shipment was ready to be loaded into the cars it consisted of 52 boxes, weighing four tons. Before sailing for overseas, Col. Quain inspected the Bismarck surgical section consignment at the point of embarkation and found it in perfect condition. In the same condition it arrived in France, ready for immediate use down to the smallest bandage and "wipe."

The Bismarck surgical section has been absorbed by Base Hospital No. 60, which is caring for 1,000 or more patients in the valley of the Meuse, where the Yanks have been striking staggering blows. Col. Quain, however, has the use of his own equipment, including the operating table and instruments which he selected before leaving America, and the supplies made for his section by Bismarck women.

A BRONZE MEDAL FOR UNIVERSITY BOYS IN THE SERVICE

The faculty, students, and alumni of the University of Minnesota are sending a bronze medal to every person now in the service who is now, or has been in the past, connected with the University in any capacity. About sixteen hundred of these medals have already been sent out; and many very appreciative acknowledgments have been received from the recipients, who are in all parts of the world. The following, recently received from Major A. T. Mann, at Camp Dodge, Iowa, is a sample of the kindly words that come back:

Your medal is received. It is a beautiful thing, strong in its sentiment, of high, artistic conception, and fine in its execution. It is a graceful, courteous thing to do,—the sending of this medal to each of the men and women of the Minnesota University who are in service. I thank you.

You may have the following names of officers now at the Base Hospital, Camp Dodge, Ia., who were connected with the University, but I will send them: Major F. E. Birch, St. Paul; Captain F. M. Manson, Worthington; Captain W. W. Lewis, St. Paul; A. W. Hilger, St. Paul.

Expected here soon: Captain C. D. Freeman, St. Paul.

In France: Lt. Col. W. A. Dennis, Major Paul Cook, and Captain Wm. O'Malley, St. Paul.

BOOK NOTICES

THE WASSERMANN TEST. By Charles F. Craig, A. M. (Hon.), M. D. (Yale), Lieutenant Colonel, Medical Corps, U. S. A., F. A. C. S., formerly Assistant Professor of Bacteriology and Pathology, Army Medical School and George Washington University; Commanding Officer, Department Laboratory, Central Dept., U. S. A., Fort Leavenworth, Kansas. C. V. Mosby Company, St. Louis, 1918. Price, \$3.00.

In this valuable new work Craig gives a complete review of the subject from the discovery of the complement-fixation and Wassermann's original technic to the latest modification of Noguchi, Kolmer, Craig, and Hecht-Gradwohl. The preparation of the various reagents is described in detail.

The author, after using it in many thousand cases, seems to favor the cholesterinized human heart extract antigen, and claims that it has never given any false positive reactions. This has not been the experience of other Wassermann workers.

His method of preserving amboceptor (on filter paper) is well worked out and described, but methods of preserving amboceptor in a liquid state (glycerin and glycerol) are not given.

Examination of the spinal fluid and the technic of the cell-count, the gold colloidal reaction, and the various globulin tests are reviewed in the last chapter.

The various tables are exact, and the many illustrations are excellent.

—SCHAAP.

A TEXT-BOOK OF OBSTETRICS. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. Eighth edition, revised and reset. Octavo of 863 pages, with 715 illustrations, 38 of them in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$5.00 net.

This revised text-book of obstetrics by Hirst is divided into six parts as follows:

Part I. The Physiology, Diagnosis, and the Management of Pregnancy.

Part II. The Physiology and Management of Labor and the Puerperium.

Part III. The Mechanism of Labor.

Part IV. The Pathology of Pregnancy, Labor and the Puerperium.

Part V. Obstetric Operations.

Part VI. The New-Born Infant.

Condensation of the text by eliminating unessential material has been the aim of the author in this revision of his text-book. By omitting a complete bibliography of each subject, the book serves as a more ready reference for medical students and practitioners. Facts vital to the subject of obstetrics are maintained. The illustrations, principally from original photographs, are self-explanatory. Hirst outlines succinctly the newer methods that have been tested to increase the safety of women during pregnancy, labor, and the puerperium.

The classification of the subjects treated is exceptionally commendable. The book ranks among the best texts on obstetrics.

—MALAND.

THE TREATMENT OF WAR WOUNDS. By W. W. Keen, M.D., LL.D., Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia. Second Edition, reset, 12mo, 276 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$2.00 net.

"The speedy exhaustion of the first edition of this little book," the author states, "has necessitated this second edition only about six months after the first was issued. The rapid progress made in the treatment of war wounds through clinical observation, but more especially by the active research work at the front, as well as base hospitals and laboratories in England, France, and the United States, has been such that this edition is almost a new book, so largely has it been rewritten."

He further states that "This report has been compiled at the request of the National Research Council, . . . and is only a memorandum on some of the more important and most recent improvements in the treatment of war wounds."

The book is written in Dr. Keen's usual clear style, and is necessarily, considering the subject, the author, and the circumstances, intensely interesting and very practical. Attention is called to the "huge numbers of wounded" treated, and we are briefly given the experience and observation of a considerable number of well-known surgeons, in the World War, and the actual application and results of carefully tried methods.

The subject is treated under the following heads:

Respects in which present war differs from previous wars.

Huge numbers in contending armies.

Shock.

New means of transportation of wounded.

Fractures.

Bibliography on orthopedics.

New weapons.

The Carrel-Daken method.

Dichloramine-T.

The "Bipp" treatment of Mr. Rutherford Morison.

Localization and removal of foreign bodies by x-rays.

Memorandum on tetanus issued by the British war office committee.

Gas-infection and gas-gangrene.

Hospital gangrene.

Wounds of the head.

Wounds of the chest.

Wounds of the joints.

Abdominal wounds.

Burns.

Personal letters.

Bibliography on rehabilitation of crippled soldiers.

Appendix.

The Cotton-Process ether.

Anesthesia during dressing of wounds.

—NELSON (C. P.)

TUMORS OF THE NERVUS ACUSTICUS AND THE SYNDROME OF THE CEREBELLOPONTILE ANGLE. By Harvey Cushing, M. D., Professor of Surgery at Harvard University. Octavo of 296 pages with 262 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$5.00 net.

This monograph consists of a study of twenty-nine histologically certified cases, together with special chapters on the various phases of diagnosis and treatment based upon Cushing's experience with these verified

cases and a much larger number of probable, though unverified, cases of acoustic tumors.

In a very interesting historical review credit is given to G. T. Stevens, an American, for first correctly localizing and describing an acoustic tumor.

The cases are taken up in a chronological order, and are of interest, not only as a series of tumors, but also as indicating the progress in the diagnosis and treatment of these growths. The importance of acoustic tumors may be realized by the fact that according to Cushing's statistics, reinforced by those of Tooth from the National Hospital, they represent approximately 6 per cent of all intracranial tumors and over 20 per cent of those in the posterior fossa.

There is a separate chapter on symptomatology, in which the symptomatic progress of the average acoustic tumor is discussed in detail. The one essential for a fairly certain diagnosis of acoustic neuromata, as opposed especially to growths involving primarily other structures in the cerebellopontile angle, is the definite precedence of auditory and labyrinthine manifestations over symptoms indicating involvement of other structures in the angle.

In the chapter on diagnosis the radiographic changes and Barany reactions occurring in these cases are discussed.

The distinguishing histologic features of these neoplasms is the unique "combination of fibrous zones in which the nuclei tend to dispose themselves in palisades or whorls, together with a loose reticular tissue containing glia-like fibrils, in which fat and hyaline metamorphosis commonly occurs." He believes the lesion is undoubtedly a true nerve tumor, and is, therefore, a neuroglioma, or a neurofibroglioma, depending on which part of the nerve it arises from. The treatment of these cases is very fully described.

With the improvement of operative methods developed by Cushing the operative mortality dropped from 35.4 per cent of the 11 cases in the Baltimore series to 11.1 per cent in the Boston series of 18 cases.

The prognosis, both as to the degree of symptomatic relief and the prolongation of life, has also notably improved under better methods and a more painstaking type of operative procedure.

—MIXON.

THE C. V. MOSBY COMPANY'S NEW CATALOGUE OF BOOKS

The fall catalogue of the Mosby Company describes an interesting line of medical, nursing, and dental books, many of them only recently published and some announced for early publication. Among the latter is a work on "The Operations of Obstetrics," by Dr. Frederick E. Leavitt, of St. Paul, of which the Company speaks in high terms of praise. Dr. Leavitt's book will be elaborately illustrated with 250 original and beautiful engravings.

FEWER AND BETTER BOOKS

The number of new medical books published this fall, and to be published next year, will be smaller than in many years past; and publishers, in self-protection, will see that fewer poor or indifferent ones are issued.

NEWS ITEMS

Dr. E. T. Robinson, of Chicago, has located at New England, N. D.

Dr. A. L. Amesbury has moved from Erwin, S. D., to Carthage, S. D.

Dr. F. L. Putnam has moved from Sioux Falls, S. D., to Council Bluffs, Iowa.

Dr. H. O. Hagen, of New Richland, received his commission as captain last month.

Dr. George Ulrich Panzer, of Truman, died last month, at the age of 37, of influenza.

Dr. E. J. Tiedemann, of La Crosse, Wis., a graduate of Rush, has located at Adrian.

Dr. John D. Utley, of the Midway Hospital, St. Paul, has been commissioned captain.

Dr. Geo. J. Tweedy, of Winona, has been commissioned captain in the Medical Corps.

Dr. H. L. Artz, of Jackson, was commissioned captain last month, and ordered to Fort Riley, Kas.

Dr. L. M. Boyd, of Alexandria, was commissioned captain last month, and ordered to Fort Riley, Kas.

Dr. S. B. Haessley, of Faribault, has been commissioned in the Medical Service, and is awaiting a call.

Dr. L. P. Foster is Minneapolis' oldest pioneer, which he became upon the death of Mr. Caleb Dorr, last week.

Dr. N. H. Scheldrup, of Minneapolis, was commissioned captain last week, and has gone to Camp Grant, Ill.

Dr. F. E. Hufnail, of Minneapolis, was commissioned captain last month, and reported at Camp Grant, Ill.

Dr. R. A. Bock, of St. Paul, was commissioned first lieutenant last month, and ordered to Fort Riley, Kas.

Dr. T. W. Weum has moved from South Haven to Minneapolis, and has offices in Suite 616, Syndicate Building.

Dr. Arthur E. Smith, of Minneapolis, received a captain's commission last month, and went to Camp Dodge, Iowa.

Dr. W. W. Higgs, of Park Rapids, was commissioned captain last month, and ordered to Fort Oglethorpe, Ga.

Dr. C. R. Sanborn, of Benidji, was commissioned first lieutenant last month, and ordered to Fort Oglethorpe, Ga.

Dr. A. H. Schwartz, of Duluth, has received a captain's commission, and been ordered to Camp Oglethorpe, Ga.

Capt. E. M. Jones, of St. Paul, on the staff of the Walter Reed Hospital, of Washington, D. C., has been made a major.

Dr. B. W. Parrott, of Long Prairie, was commissioned captain last month, and ordered to Camp Oglethorpe, Ga.

Dr. Arthur C. Carlson, of Minneapolis, has been commissioned first lieutenant, and has gone to Camp Custer, Mich.

Dr. Stanley V. Hodge, of Minneapolis, received a commission as first lieutenant last week and left for Camp Pike, Ark.

Dr. H. A. Murnan, of Gregory, S. D., received the commission of captain last month, and reported at Camp Funston, Neb.

Dr. W. P. Lee, of Northfield, was commissioned first lieutenant last month. Dr. Lee has gone into the service in France.

Dr. A. G. Kessler, superintendent of the Otter Tail Sanatorium, has gone to Italy for tuberculosis work for the Government.

Major A. T. Mann of Minneapolis was at home last week on a twenty-four hour leave from the base hospital at Camp Dodge, Iowa.

The epidemic in Minneapolis caused the city to clean up its "Chinatown." Many Orientals were found living in air-tight basements.

Capt. M. W. Roan, of Bismarek, N. D., was ordered to remain in Bismarek, because of the epidemic, and not to report at Fort Riley.

Dr. J. H. Beaty was appointed city physician of St. Cloud last month, and Dr. C. S. Sutton succeeded him as a member of the city health board.

Dr. W. J. Moore has moved from Woodlake to Adams after practicing for seventeen years in the former place. Dr. Moore will do hospital work in Adams.

Major F. J. Plondke, of the medical staff of the Adjutant General's office, had charge of the medical relief of the sufferers in the recent forest fires in Minnesota.

The recent death of Dr. A. H. Youngs, of Pierre, S. D., and the absence of other physicians of the city in the service, leaves Pierre handicapped for physicians.

The Eitel Hospital of Minneapolis loaned four nurses for the fire refugees at Duluth, and has just contributed five to the army, the latter going to Camp Kearney, Neb.

The department of Bacteriology of the University of Minnesota will send antipneumonia vaccine to any physician in Minnesota free of charge upon application.

Drs. R. E. Bechtel and H. S. Rawlings, of the More Hospital staff of Eveleth, have entered the service. This hospital has contributed six members of its staff to the service.

Dr. Geo. Douglas Head, of Minneapolis, president-elect of the Minnesota State Medical Association, was commissioned major last week, and has gone to Camp Wheeler, Ga.

Major Clyde E. Prudden, of Duluth, died last month on shipboard, just before landing in France, at the age of 30. Major Prudden was a graduate of Northwestern, Class of '09.

Dr. Walter S. Muirhead, of Floodwood, lost his life in the Minnesota forest fires last month. He was 33 years of age, and had been married only a few days, at the time of his death.

Miss Eva Hasle, R. N., a graduate of the University Hospital Training School for Nurses, has accepted the position of superintendent of nurses at the St. James Hospital and Sanitarium.

Dr. G. R. Christie, of Long Prairie, was summoned to army service last month, and ordered to Charleston, W. Va., but the order was revoked because of the need of his services at home.

Dr. W. E. Donahue, of Sioux Falls, S. D., was commissioned and called into service at Fort Riley, last month. Dr. Donahue is the eleventh physician from Sioux Falls to enter the service.

Dr. W. H. Bodensab, of Bismarck, N. D., was commissioned captain last month, and ordered to Colonia, N. Y. Capt. Bodensab is the seventh member of the Quain & Ramstad Clinic to enter the service.

Dr. F. G. Kohler, who recently went to Hector, to take over the practice of Dr. McKibben, has followed Dr. McKibben into the service. He was commissioned first lieutenant, and went to Camp Custer, Mich., last week.

Dr. B. W. Parrott, of Long Prairie, was called into the service last month, and Dr. Van Valkenburg, of that city, has moved from the city, thus making it necessary for the Government to retain Dr. Christie at that place.

Fifty-two boxes containing four tons of supplies contributed by the Bismarck (N. D.) women to the surgical unit organized by Lieutenant Colonel E. P. Quain, have reached the unit, which is now on the Meuse in France.

The annual meeting of the Southern Minnesota Medical Association, which was to be held on November 25 and 26, has been indefinitely postponed on account of the prevalence of influenza and the absence of many physicians.

Dr. Alfred Long, in charge of the Mankato Branch Laboratory of the Minnesota State Board of Health, has been appointed assistant professor of bacteriology and pathology in the Medical School of the University of North Dakota.

Dr. N. H. Beal, of London, Ontario, who recently became a member of the Mayo Clinic, died last month at Rochester of influenza at the age of 36. Dr. Beal was formerly assistant professor of Surgery in the Western University of London.

Drs. Caroline E. Finley, Anna T. Sholly, and Mary L. Edwards, on the staff of the Women's Overseas Hospital in France, have been commissioned first lieutenants by the French Government for "excellent surgical work performed under bombardment."

Dr. Robert C. Reimche, of Harvey, N. D., died on October 24, at the age of 39, of influenza. Dr. Reimche was a graduate of Rush, and formerly practiced in Chamberlain, S. D. He was president of the Harvey Surgical Association at the time of his death.

The Ramsey County Medical Society refused, by a divided vote, to endorse the public-assembly closing recommendations of the Citizens' Committee of St. Paul, on account of the influenza epidemic; but the city's health officer issued the closing orders. The Society's recommendations will be found on another page of this issue.

Of the firm of Drs. Larson, Kearney, Durnin & Porter, of Great Falls, Mont., Major Larson, Capt. Porter, and Lieut. Durnin are in the service, and Dr. Kearney has applied for a commission. Dr. Kearney is a graduate of the University of Minnesota, Class of '04. He is just recovering from an attack of influenza and pneumonia.

Dr. James Edward Moore, of Minneapolis, died on November 2, of pernicious anemia, at the age of 66. Dr. Moore graduated from Bellevue Hospital Medical College in 1873, and after graduation spent three years in the study of surgery in Berlin and London. He came to Minneapolis in 1883, and soon began to practice surgery exclusively. For many years he was recognized as one of the leading surgeons in America. At the time of his death he was at the head of the surgical department of the Medical School of the

University of Minnesota, and a memorial from the Medical School staff appears on another page of this issue.

The Board of Examiners for the Medical Corps of the Army for the Northwest District has been transferred from Minneapolis to St. Paul, and is now quartered in the Army Building at Robert and Second Streets, Room 305. Capt. Ralph St. J. Perry, M. C., is still president of the Board, though recently assigned to duty as Medical Officer of the Personnel Board, Chief of Staff Corps, for the Northwest District. Capt. Perry suggests that all newly commissioned officers of the Medical, Sanitary and Dental Corps, and Reconstruction Aides, call upon him by mail, telephone, or in person, for assistance in matters of equipment, transportation, etc., as many are purchasing unnecessary equipment, getting wrong transportation, etc. The Captain says that part of his work is to help clear up misunderstandings regarding orders for reporting, extensions of time and such matters, and he is always ready to do what he can for those entering the service.

RECENT ASSIGNMENTS AND TRANSFERS OF NORTHWESTERN MEDICAL OFFICERS

ASSIGNMENTS

Minnesota—

To Camp Dodge, Iowa: Capts. G. E. Benson, A. E. Smith, and A. H. Parks, Minneapolis; Capt. C. C. Blakeley, St. Peter; Capt. A. N. Collins, Duluth.

To Camp Beauregard, La.: Capts. M. M. Ghent and M. C. Welch, St. Paul.

To Camp Custer, Mich.: Lieut. J. C. Koch, Blackduck; Lieut. F. G. Kohler, Stewart; Capt. F. H. Aldrich, Belview; Lieut. T. L. Chapman, Duluth.

To Camp Grant, Ill.: Capts. N. H. Scheldrup and Ivar Sivertsen, Minneapolis; Capt. S. B. Haessly, Fari-bault; Lieut. F. F. Morehouse, Owatonna; Lieut. W. O. Ott, Rochester; Capt. C. I. Oliver, Graceville.

To Camp Lee, Ga.: Capt. P. A. Higbee, Minneapolis.
To Fort McPherson, Ga.: Capt. A. W. Shaleen, Hallock.

To Fort Riley, Kas.: Capt. Theo. Thardarson, Minnesota; Capt. W. P. Lee, Northfield; Lieut. C. D. Kolset, Benson; Lieut. E. E. Cress, Boyd; Lieut. A. E. Phillips, Delano; Lieuts. M. B. Beckman, Henry Lysne, and C. L. Rodges, Minneapolis; Lieut. C. F. Carstens, Hibbing; Lieut. D. M. O'Donnell, Ortonville; Lieut. R. E. Bechtel, Eveleth; Lieut. G. A. D. Eisengraeber, Granite Falls; Lieuts. B. W. Jarvis, I. J. Murphy, and Myron Sherper, St. Paul.

To Camp Jackson, S. C.: Capt. G. B. Eusterman, Rochester.

To Camp Meade, Md.: Lieut. P. J. Eisenberg, St. Paul.

To Camp Pike, Ark.: Capt. W. N. Kendrick, Spring Valley.

To Camp Wheeler, Ga.: Major Geo. D. Head, Minneapolis.

To New York City (Neurological Institute): Lieut. J. A. Evert, Brainerd.

To Newport News, Va.: Capt. J. L. Crenshaw, Rochester.

To Fort Oglethorpe, Ga.: Capt. J. W. Doyle, Minneapolis; Capt. W. W. Higgs, Park Rapids; Lieut. C. J. Goodheart, Akeley; Lieut. H. T. Rawlins, Eveleth; Lieut. A. L. Hamel, Minneapolis; Lieuts. G. A. Murray, C. M. Clark, and P. A. O'Leary, Rochester.

Montana—

To Camp Dodge, Iowa: Capt. W. V. Kingsbury, Butte.

To Camp Grant, Ill.: Capt. J. G. Thompson, Helena.

To Fort Oglethorpe, Ga.: Lieuts. B. E. Kane and L. W. Smith, Butte.

To Fort Riley, Kas.: Lieuts. R. B. Durnin, F. E. Keenan, and B. E. Lord, Great Falls; Lieut. F. J. Williams, Butte; Lieut. C. W. Wilder, Lewiston; Lieut. J. C. Doctor, Philipsburg; Lieut. W. B. Shore, Red Lodge.

North Dakota—

To Colonia, N. J.: Capt. W. H. Bodenstab, Bismarck.

To Camp Logan, Texas: Lieut. F. A. Bruchman, Minot.

To Fort Oglethorpe, Ga.: Lieut. H. A. Brandes, Hebron; Lieut. L. A. Shipper, Bismarck.

To Fort Riley, Kas.: Lieut. R. C. Heron, Tolma; Lieut. F. E. Ewing, Kenmare; Lieut. C. A. Platou, Jr., Litchville; Lieut. E. E. Hamilton, New Leipsig; Lieut. C. A. Kerner, Tuttle; Lieut. A. R. Sorenson, Rugby.

South Dakota—

To Austin, Texas: Lieut. L. F. Beall, Irene.

To Camp Custer, Mich.: Capt. W. I. Brenner, Willow Lake.

To Hoboken, N. J.: Lieut. G. E. Van Demark, Sioux Falls.

To Fort Oglethorpe, Ga.: Lieut. R. J. Morrissey, Fort Pierre; Lieut. M. C. Johnston, Aberdeen.

To Fort Riley, Kas.: Capt. C. A. Murnan, Gregory; Lieut. F. N. Cliff, Milbank; Lieut. W. S. Chapman, Mellette; Capt. J. F. D. Cook, Langford; Capt. R. P. Frink, Wagner; Lieut. I. U. Vangness, Beresford; Lieut. Thos. Arnold, Delmont; Lieuts. J. H. Doupe and A. P. Hawkins, Waubay; Lieut. W. E. Donahoe, Sioux Falls.

To New Haven (Yale Laboratory), Conn.: Lieut. Louis Holtz, Aberdeen.

TRANSFERS

MINNESOTA OFFICERS

Capt. A. S. Fleming, Minneapolis, from St. Paul, to Mineola, N. Y.

Capt. O. H. Wilcox, Minneapolis, from Camp Cody, N. M., to Camp Knox, Ky.

Capt. H. L. Ulrich, Minneapolis, from Camp Sevier, to Fort Oglethorpe, Ga.

Lieut. E. O. Swanson, St. Paul, from Fort Oglethorpe, Ga., to Boston (Harvard), Mass.

Lieut. F. H. Neher, St. Paul, from Fort Riley, Kas., to Boston (Harvard), Mass.

Capt. A. E. Comstock, St. Paul, from Fort Oglethorpe, Ga., to Mobile, Ala.

Lieut. S. S. Hesselgrave, St. Paul, from Fort Riley, Kas., to Camp Taylor, Ky.

Lieut. A. D. Cornica, St. Paul, from Lake Charles, La., to Camp Beauregard, La.

Capt. H. P. Bacon, Milaca, from Camp Dodge, Iowa, to Camp Crane, Pa.

Capt. C. R. Christenson, Starbuck, from New Haven, Conn., to Camp Crane, Pa.

Capt. F. W. Briggs, Moorhead, from Camp Dix, N. J., to Camp Crane, Pa.

Lieut. F. T. Benoit, Slayton, from Fort Oglethorpe, Ga., to Camp Crane, Pa.

Lieut. W. B. Martin, Fergus Falls, from Fort Oglethorpe, Ga., to Camp Custer, Mich.

Capt. C. P. Robbins, Winona, from Fort Oglethorpe, Ga., to Camp Sheridan, Ala.

Lieut. J. R. McVay, Rochester, from Camp Lee, Va., to Columbus, Ga.

Lieut. P. S. Epperson, Biwabik, from Camp McClellan, to Fort Oglethorpe, Ga.

Lieut. P. Blanco, Rochester, from Washington to Lakewood, N. J.

Capt. W. J. Cochrane, Lake City, from Fort Oglethorpe, Ga., to N. Y. City (Rockefeller Institute).

MONTANA OFFICERS

Lieut. A. C. Knight, Butte, from Camp Wadsworth, N. C., to Hoboken, N. J.

Capt. A. T. Gilhus, White Sulphur Springs, from Camp Dodge, Iowa, to Camp Crane, Pa.

Lieut. A. G. Biddle, Butte, from New York City to Fort Oglethorpe, Ga.

Lieut. C. E. Whitehead, Logan, from Camp Joseph E. Johnston to Mineola, N. Y.

Capt. E. F. Dodds, Missoula, from Camp Lewis, Wash., to Camp Crane, Pa.

Lieut. W. G. Palm, Joplin, from Camp Fremont to Camp Crane, Pa.

Capt. O. T. Stratton, Cascade, from Fort Oglethorpe, Ga., to N. Y. City (Rockefeller Institute).

NORTH DAKOTA OFFICERS

Capt. A. M. Fisher, Bismarck, from Camp Dodge, Iowa, to Camp Lewis, Wash.

Capt. O. W. McClusky, Carrington, from Fort Riley, Kas., to Camp Crane, Pa.

Lieut. C. L. Callander, Fargo, from North Dakota Agricultural College to Fargo.

Lieut. W. H. Witherstine, Grand Forks, from Camp Grant, Ill., to Camp Crane, Pa.

Lieut. Hubert Van de Erve, Sherwood, from Fort Riley, Kas., to Camp Crane, Pa.

SOUTH DAKOTA OFFICERS

Lieut. R. G. Stevens, Sioux City, from Camp Dodge, Iowa, to Camp Crane, Pa.

Lieut. B. H. Sprague, Huron, from Camp Grant, Ill., to Camp Crane, Pa.

Capt. W. D. Farrell, Aberdeen, from Camp Crane to Camp Dix, N. J.

Lieut. F. I. Putnam, Sioux City, from Fort Oglethorpe, Ga., to Camp Dix, N. J.

Capt. R. W. Mullen, Florence, from Camp Cody, N. M., to Rochester (Mayo Clinic), Minn.

OFFICE POSITION WANTED

A competent girl who lives at home desires a position in a physician's or dentist's office in Minneapolis. Best of references given. Address 161, care of this office.

PHYSICIAN WANTED

To take charge of the medical department of a successful sulphur springs and mud bath sanitarium near the Twin Cities. Good salary. Give full account of yourself. Address 153, care of this office.

LOCUM TENENS WANTED

A firm with a large practice in a fine Minnesota town wants an assistant to whom a good salary will be paid. To the right man, one who can do some surgery, the work will probably be permanent. Address 159, care of this office.

PRACTICE FOR SALE

Large country practice for sale at price of office equipment. Good town to live in; rich surrounding country; can transfer large part of practice to competent man. Address Mrs. Howard Kerns, Granite Falls, Minn.

LOCUM TENENS WANTED

A man to take charge of my practice for four weeks beginning October 20th. General practice, obstetrics, and surgery. Will furnish a man office, light, and fuel, and give him all he can make. Am taking in \$500 a month in cash. Address 152, care of this office.

TECHNICIAN WANTS POSITION

Middle-aged woman desires a position as technician in a hospital laboratory or physician's private laboratory. Can also develop plates and have some knowledge of x-ray. Have had six years' experience in physician's office. Can furnish references. Address 154, care of this office.

OFFICE EQUIPMENT FOR SALE

Here is an excellent opportunity for a physician to buy an exceptionally fine office equipment, including a new X-ray outfit, etc., and to step into a fine practice. Office is located in the heart of a Minnesota town of 16,000 inhabitants with only seven physicians. Large country territory. Must be taken at once. Reason for selling, decease of owner. Address 158, care of this office.

PHYSICIAN WANTED

Physician for the Out-Patient Department of the City and County Hospital of St. Paul; attractive salary with maintenance and use of car. This is an unusual opportunity for a man wishing to build up a city practice. Answer with full particulars,—age, married or single, experience, references, etc. Address Arthur B. Ancker, Superintendent, City and County Hospital, St. Paul, Minn.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-second annual session, opened Sept. 23, 1918, and closes June 7, 1919. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters. For further information address Charles Chassignac, M. D., Dean, postoffice drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

Calories Per Pound

Quaker Oats	1810	Round Steak	890
White Bread	1200	Eggs	720
Young Chicken . . .	505		

Cost Per 1000 Calories

Quaker Oats	5 cents	Eggs over	50 cents
Meats on average . .	40 "	Fowl on average . .	50 "

THE oat stands high among grain foods in nutrition.
It stands high in proper balance.

It is 16 per cent protein—the proper proportion. It is rich in minerals.

Its flavor is inviting.

Meat, eggs, fowl and fish will average, for the same energy units, from 8 to 10 times its cost.

It means better living, and lower cost of living.

Quaker Oats

Quaker Oats is flaked from queen grains only—just the rich, plump oats. We get but ten pounds from a bushel. Its use means extra flavor without extra price.

The Quaker Oats Company

Chicago

PUBLISHER'S DEPARTMENT

MELLIN'S FOOD

Mellin's Food is a safe food for babies, and this is conclusively demonstrated by its formula, which is given on every package of the product and in all descriptive advertising matter sent out. The exact percentage of fat, protein, carbohydrates, and salts, and the amount of skimmed milk and water to be mixed with it, are given. The testimonials of almost millions of babies (fat and, we may add, handsome babies) that have thrived on an exclusive diet of it, and at hand; and, surely, nothing more can be asked by the physician who has a baby patient that must be fed upon an artificial food.

The business course pursued by Mellin's Food Company with both the public and the medical profession is worthy the highest commendation.

THE ASBURY HOSPITAL OF MINNEAPOLIS

The Asbury Hospital of Minneapolis is not only a big institution, but it is a great institution. It is run true to its motto, "Not to be ministered unto, but to minister." When a hospital loses sight of such a guiding-star, it is indeed in danger of losing its own soul.

One never hears a disparaging word of Asbury Hospital from surgeon or patient, but one does hear words of the highest praise from many such persons.

The equipment of Asbury is that of the best modern hospital. Its management, lay and professional, is in the hands of the most competent in each line; and it may be truly said that the institution is a credit to its managers, to the city, and to the medical profession.

Its charges are right charges, and it neither pauperizes nor extorts.

Mrs. S. H. Knight, a woman of refined tastes, of culture, and of independent financial means, is the superintendent and guiding spirit of this high-grade, public-serving institution; and she will answer all personal questions addressed to her.

K-Y ANALGESIC AND K-Y LUBRICATING JELLY

We do not recall any two new products put before the profession in many years which demonstrated their efficiency and general worth so quickly and so completely as the above two products. The claims for them are almost instantly demonstrable claims, and this, of course, mean that such products have merit.

The K-Y Analgesic is a non-greasy water-soluble anodyne for the relief of pain in facial neuralgia, inflamed joints, and aching lumbar muscles without the use of the coal-tar products.

The K-Y Lubricating Jelly is for local application in pruritus, chafing, and irritations, as well as for surgical lubrication.

These are indeed scientific products, and are now manufactured by the well-known house of Johnson & Johnson, whose name is familiar to every medical man, perhaps, in the world; and it has been made so by the excellence of everything produced by the firm and offered the medical profession.

THE MEYER INTERRUPTERLESS X-RAY APPARATUS

The best testimonial to an appliance whose efficiency and adaptability one cannot readily determine for himself by its use, is its standing with others in his line of work.

The Meyer x-ray apparatus has made its way, upon its known merits, into so many hospitals that no one can fail to draw conclusions therefrom.

The great City Hospital of Minneapolis has just been equipped with one of the largest of these appliances, made by the Wm. Meyer Company, of Chicago, which was installed by the Standard Medical Supply Company, of Minneapolis, whose guarantee that the appliance will do all that is expected of it and all that is promised for it, backs their enthusiastic claims for the Meyer apparatus.

FELLOWS' SYR. HYPOPHOSPHITES COMP.

If the testimony of long usage by men of the highest standing in the medical profession has any value, then Fellows' Hypophosphites must have real value, for such testimony is to be found in so great abundance that it furnishes overwhelming evidence that satisfactory results have been obtained by such men.

To brush away all claims for the efficacy of hypophosphites by laboratory conclusions, is to brush away the claims for the efficacy of three-fourths or more of all the therapeutics of medicine.

Fellows' Syr. Hypophosphites Comp. is one of the best known and most widely used therapeutic preparations in use in America and Europe.

MUDLAVIA

The hopeless (in their own minds) victims of rheumatism, gout, arthritis deformans, and neuritis are to be found in vast numbers, and of both sexes, in all climates; and most of them know of Mudlavia, but only those who have gone to Kramer, Ind., know how quickly relief is furnished by this treatment, and how long the relief lasts if proper care is taken by the relieved patient.

The results obtained in many chronic cases are little short of marvelous, and the percentage of cases cured is too great to question the efficiency of the treatment.

The managers of Mudlavia always desire to work with the family physician, never in antagonism to him; and this is commendable.

For detailed information address W. C. Kramer, General Manager, Kramer, Ind.

REST AND CONVALESCENT HOME

The above home has recently been established at 3349 Second Ave. So., Minneapolis, for the care of a very limited number of chronic nervous and mild mental cases.

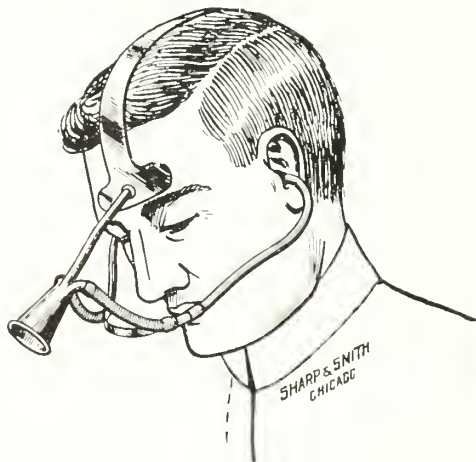
The Home is conducted on the strictest ethical lines by a registered nurse of long and successful experience in this work and a dietician who thoroughly understands her work.

The Home is pleasantly situated in a good residence part of the city, and under its excellent management cannot fail to meet the requirements of the most exacting physician.

For any information desired, address Ina E. Varco, Superintendent, at the address given above.

De LEE-HILLIS IMPROVED STETHOSCOPE

Frequent observation of the fetal heart tones during the last part of the second stage of labor present certain technical difficulties after the at-



tendant is surgically prepared for the delivery. In breech labors in which the heart tones must be watched very carefully, it is always desirable and often necessary for the operator to observe the heart tones himself.

In order to make this easily possible, a stethoscope was devised which consists of a metal band similar to those used on head mirrors, passing from front to back, over the top of the head. The Y of the binaural stethoscope is fastened to the front plate of this band. This permits proper adjustment of the ear pieces and holds the stethoscope in a position above the line of sight at right angles to the forehead.

An experience of several months with its use at the Chicago Lying-In Hospital indicates that it has the following advantages:

It gives easy and accurate control of heart tones.

After adjustment, no handling is required.

Heart tones are heard better, since there is bone conduction through the metal parts of the instrument, in addition to the air conduction of the ordinary stethoscope.

The bell may be pressed firmly against the abdominal wall without interference from muscle sounds.

PRICE, COMPLETE, \$6.00

SHARP & SMITH

Manufacturers, Importers and Exporters of High Grade Surgical Instruments and Hospital Supplies

65 East Lake St. - - CHICAGO, ILL.

Two Doors North of Randolph St.

Established 1844

Incorporated 1904

As an aid in Diagnosis

*use a Laboratory whose
personnel and equipment
are beyond question*

ACCURACY, DEPENDABILITY AND PROMPTNESS ARE OUR CHIEF AIMS. Send to our nearest laboratory for fee list and containers with instructions for collecting all specimens. These containers will be sent gratis upon request.

Examination of Pathological Tissue \$5.00

Accurate histological descriptions and diagnoses of tissues removed at operation should be part of the clinical record of all patients.

Autogenous Vaccines . . . \$5.00

We culture all specimens aerobically and aenaeobically and isolate the offending organisms. Pipettes for collecting material for autogenous vaccines sent upon request.

Wassermann Test, Blood or Spinal Fluid \$5.00

We do the classical test. Any of the various modifications will be made upon request without additional charge.

*Sterile containers, with needle,
gratis upon request*

National Pathological Laboratories (Incorporated)

CHICAGO, ILL.
5 S. Wabash Ave.

ST. LOUIS, MO.
4485 Olive St.—Corner Taylor

NEW YORK, N. Y.
18 E. 41st St.

FROM ABATTOIR TO TUBE

The above is a brief, a catchy, and a true statement of a fact that has much significance for every surgeon. "Infection" is a dreaded word by every surgeon, as is of consequence to every patient who undergoes surgical treatment, however slight.

The almost total absence of infection due to a surgical operation, is due to precautions, so pains-taking and so minute as to inspire those not familiar with them, especially such as are observed in the preparation of surgical ligatures. The fact is emphasized in the caption of this item of information—"From Abattoir to Tube."

Every step of this route is a dangerous one if eternal vigilance, the vigilance of scientific procedure, is not observed.

The Hollister-Wilson Laboratories of Chicago, a branch of a great packing house, make ligatures by scientific processes, carried out from "abattoir to tube," that never fail to produce ligatures which cannot possibly cause even a stitch infection; and the surgeon who uses these ligatures need never fear the slightest trouble from them. Unless a surgeon has back of his ligature the guarantee of a fixed reputation and a scientific process, he can never feel certain that his own reputation will not suffer. Surgical infection is always ascribed to the carelessness of the surgeon, and to protect himself the surgeon should remove every source of possible infection.

The "Hollister" ligatures guarantee safety; and when a surgeon has used them long enough to know them, he will say, "I will use no other."

MRS. MOREY'S PRIVATE MATERNITY HOME

Mrs. Cora Morey conducts in Minneapolis a maternity home that has the commendation of physicians and social workers interested in the patients of such an institution, and she will furnish any physician satisfactory references as to her work in this line.

The above points are of value to every medical man referring patients to a maternity home.

For all information desired, address Mrs. Cora Morey, 2014 26th Ave. So., Minneapolis, or call her by phone, N. W. Main 6768.

KORA-KONIA

"Success is not always attained on the jump." Many an agent has grown steadily in favor and in use as test after test drives home the conviction of its merits. Kora-Konia is a good example of this. Kora-Konia was originated and designed particularly for professional use as a dusting and a dressing powder. Its ingredients are carefully selected, properly proportioned according to the best information obtainable, and the powder itself is steadily increasing in use as the results from many trials made with it prove more and more convincing.

Kora-Konia is soothing and healing to a marked degree. Its application to a raw or abraded surface is not followed by any reaction. It makes an ideal dressing powder, because it possesses sufficient adhesiveness to cause it to cling closely to the surface and thus aid in forming a protective film. It does not produce irritation and it is economical to use. A package of Kora-Konia should be in every physician's kit bag, in his obstetric bag and in his office, because the many opportunities for its use will enable him to demonstrate to his own satisfaction, as well as to the gratification of his patients, the value of Kora-Konia, as well as its superiority over other agents intended for similar purposes.

A sample of Kora-Konia will be sent to any physician on request.

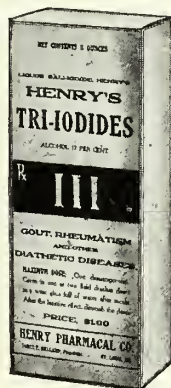
House of Mennen, Newark, New Jersey.

Build up a reserve fund in a Savings Account at the

First and Security National Bank

Capital and Surplus Ten Million Dollars
Marquette Avenue at Fifth Street

We Invite You to Do Your Banking here



TRI-IODIDES (HENRY'S) LIQUOR-SALI-IODIDES--8 oz. Bottles, Price \$1.50

Valuable in acute or chronic diseases of the bones and joints, rheumatism, gout, syphilitic blood taint, eczema, psoriasis and all dermic disorders in which there is an underlying blood impurity.

SPECIAL NOTICE TO PHYSICIANS.

We will send an Original Bottle, \$1.50 size, *Tri-Iodides* to any Physician who will send us 30c. Express Charges on same. Send Coin Stamps, Express or Money Order.

WRITE FOR BOOKLET.

Henry Pharmacal Co., 121 Vine Street,
ST. LOUIS, MO.

Rest and Convalescent Home

3349 Second Ave So., Minneapolis
N. W. Phone Colfax 2507

Conducted on Strictly Ethical Lines.
¶ Equipped to care for a Limited Number of Patients. ¶ Chronic Nervous and Mild Mental Cases Solicited. ¶ Location is Ideal—three short blocks from carlines. ¶ Strict Attention given to Dietetics.

INA E. VARCO, Supt. and Dietitian

EYE SIGHT TESTS

ALL cases referred to me will be refracted carefully and the courtesy treated in a purely ethical manner.

K. J. KNAPP

REGISTERED OPTOMETRIST

KINDY-KNAPP, Inc.

719 Nicollet Ave.

Minneapolis.

N. W. 7038—T. S. 33929

Be Sure You Get
The Minneapolis Milk
Co's Bottling



IT MEANS PURE MILK

Milk is the cheapest and best food on the market today, and every family can save money by using two or three times the usual amount consumed by the family. ¶ A perfectly pasteurized milk is perfectly free from all harmless germs; and no other milk should be used by either children or adults. ¶ Our milk is scientifically pasteurized at an absolutely uniform temperature as applied from day to day. Every process it goes through is an automatic process, eliminating every chance of contamination. ¶ Physicians can recommend it with certainty that it meets all their demands for purity and for uniformity in the elements that make milk an ideal food, both for the well and the sick.

METROPOLITAN MILK COMPANY

T. S. 33 377

900 SOUTH SIXTH STREET

N. W. Main 2348

100% American

THE BAYER COMPANY, Inc. is controlled by the Alien Property Custodian and the manufacture and sale of its products are entirely under the supervision of **American Officers and Directors** appointed by him.

As soon as its books have been audited and the property appraised, the capital stock of the Company will be sold by the Alien Property Custodian to **American Citizens**.

All profits as well as all the money realized from the sale of the Company will be used for the purchase of Liberty Bonds to help in the prosecution of the War until the **complete defeat of Germany**.

Therefore, genuine Bayer-Tablets and Capsules of Aspirin as well as other Bayer products can be purchased with full confidence.

THE BAYER COMPANY, Inc.

117 HUDSON STREET

NEW YORK, N. Y.

THE JOURNAL-~~L~~ANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, DECEMBER 1, 1918

No. 23

TRACHOMA*

BY J. H. OAKLEY, M. D.

Surgeon United States Public Health Service.

WASHINGTON, D. C.

The term "trachoma" is derived from a Greek word meaning *rough*, and signifies a roughness or granular condition of the conjunctiva. The term has been in use since the time of Hippocrates (460-377 B. C.), by whom this form of ophthalmia was described.

From the papyrus of Ebers, discovered at Thebes, Egypt, in 1872, and written one thousand years before Hippocrates lived, it is evident that trachoma and other diseases of the eye were studied and prescribed for in Egypt.

Boldt has said, "Trachoma is as old as the Nile, the simoon, and the desert." Dr. L. Webster Fox defines trachoma or granular conjunctivitis as a contagious, specific disease of the palpebral conjunctiva, characterized by increased thickening and vascularity and by the formation of granular elevations of lymphoid infiltrations, which undergo ulceration and subsequent cicatrization. The disease is of a chronic nature, prone to remissions and exacerbations, and often lasts for years.

It is a disease of oriental origin. Originally endemic in the far East it worked its way westward along the caravan routes and became domiciled along the southern shores of the Mediterranean Sea.

Before the beginning of the last century very little was known of the disease in Europe. The return of Napoleon's soldiers from Egypt, in

1800, has been blamed for the introduction of trachoma into Europe. It is now widespread in Europe, and in some localities causes over 50 per cent of all cases of blindness.

It is observed in Russia, Poland, Austria, Hungary, Germany, Finland, and Holland. It is very prevalent in Italy and Greece, quite rare in France, and not often seen in England, Scotland, and Wales, but is frequently seen in Ireland. It is not uncommon in Spain. It has been observed in some of the Central and South American countries. It prevails to a large extent in Japan. Trachoma is becoming quite widespread in the United States, having been observed in nearly every state of the Union. Cases have been seen in Alaska and the Philippines, in Porto Rico, and in Cuba. Numerous cases are seen among the Indians of Minnesota and the Dakotas.

In 1897 the Surgeon General of the U. S. Public Health Service classed trachoma as a dangerous contagious disease within the meaning of the immigration laws; and in ten years ending just before the great World War broke out 22,984 cases of the disease were detected among the 11,966,897 aliens seeking admission to this country. It is very important that an officer of the U. S. Public Health Service on immigration duty know something about trachoma.

The failure to recognize a case leads to the admission of a contagious disorder into the United States. A mistake in calling some other

*Read at the 31st annual meeting of the North Dakota State Medical Association, at Fargo, June 19 and 20, 1918.

eye disease trachoma works a hardship and injustice on the alien by causing him to be deported. The general practitioner has no such responsibility. A mistake in the diagnosis of trachoma works no injustice, and the speedy cure that follows treatment in such cases redounds to the credit of the physician.

When on immigration duty, if we are in doubt, we hold the case for observation, and give a mild treatment for a few days or even a few weeks, if needed, at the end of which time we are, as a rule, able to make a diagnosis.

The disease may be contracted at any age except that very young children escape. This is perhaps due to the fact that the adenoid elements of the conjunctiva are not present in very young children, and are not thoroughly developed until after the second year of life. I have examined the eyes of many negroes, but have never seen a case of trachoma in a full-blooded negro.

No specific agent of the disease has as yet been isolated. The disease is spread by the secretion of the diseased eye. In 1882, Michal and Sattler announced that they had discovered a diplococcus in the trachoma discharges which they believed to be the cause. These claims were unfavorably disposed of later. The disease is most frequently found in the inhabitants of barracks, asylums, almshouses, schools, etc., where people are prone to be careless in the use of the towel, handkerchief, common wash-basin, etc.

It is stated that in the first half of the nineteenth century one soldier in five of the Belgian army had trachoma. It is alleged that the soldiers were discharged from the army and sent home. This cleared the army of trachoma, but carried the disease to the homes and civilian population. During the Russo-Japanese War the disease appeared among the Japanese troops, and large numbers of soldiers were isolated and treated.

The disease is usually bilateral, and in many cases its initial course is so insidious that the patient is not aware of its presence until it is well developed or until the lids are turned and the trachomatous condition discovered.

The disease usually begins in the upper part of the conjunctiva above the tarsal plate. It is seen in the lower lid in advanced cases. Well-developed cases are easy to diagnose. In the quiescent stage and in mild cases the diagnosis is more difficult. A trachomatous eye in the quiescent stage is subject to acute inflammations from other agents. A trachomatous eye shows a heavy

lid and some ptosis of the thickened lid, and the lid follows the movement of the eyeball. There may be some secretions and pus.

On turning the lid we see the granular bodies, which look like small sago grains or frog spawn, or in advanced cases we see the cicatricial condition, the pearly-white glistening scar tissue. This cicatrization is nature's effort to cure the disease. There are three stages of the disease, namely, the stage of invasion, the stage of extrusion of follicular contents, and the stage of cicatrization. In the last stage we see the effects of cicatricial contraction, — entropion, trichiasis, symblepharon, corneal opacities resulting from healed ulcers, and pannus. The mucous membrane is pearly and glistening, and the retrotarsal fold is frequently obliterated, the membrane passing directly from the lids to the eyeball.

Follicular conjunctivitis is often confounded with trachoma, especially in mild or quiescent cases of trachoma. In follicular conjunctivitis there is a follicular hypertrophy, never a true papillary hyperplasia, and there is no formation of cicatricial tissue. The small subconjunctival vessels passing forward on the under surface of the lid are never destroyed. Sometimes the hypertrophied follicles undergo calcareous or fatty degeneration. This never happens in the papillary hyperplasia of trachoma.

In the treatment of trachoma many measures, too numerous to mention, have been made use of. The main thing is to aid nature's attempts at a cure, and prevent or restrict corneal complications.

If the inflammation is acute, reduce the same by cold applications two hours at a time with one hour intervals. Wash secretions away with a 4 per cent boric-acid solution or with a normal salt solution, and treat with a 20 per cent argyrol solution three times a day. Remove the contents of the granules with Knapp's roller forceps or Noye's forceps, if the granulations are not too hard.

If the case is an old one and the granules are hard, perform the grattage operation. Two instruments have been devised for this operation, — the Darier forceps and a tribladed scarificator. The upper lid is grasped by means of the forceps, and turned upon itself until the retrotarsal fold is thoroughly exposed. A horn spatula is inserted under the lid to protect the cornea. The granulated area of the lid is scarified with the three-bladed scalpel, after which the surface is scrubbed with gauze or a stiff tooth-brush dipped

in 1 to 1,000 bichloride solution. The whole palpebral conjunctiva must be treated. If the lower lid is involved, it should be treated in the same manner. Cold compresses and soothing applications are applied, and usually within twenty-four hours the lids can be opened without much pain or discomfort. Dr. Coover uses sandpaper soaked in sublimate solution after scrubbing with the tooth-brush and gauze. Frequently a Burow's operation (cutting through the cartilage on the conjunctival surface from the inner to the outer canthus), when performed at the same time as the grattage, aids in expanding the lids. Ex-tirpation of the tarsus, recommended by Kuhnt, is beneficial in chronic cases associated with great infiltration and thickening of the tarsus. Burow's operation and the removal of the tarsus relieve the pressure on the eyeball, allow of its freer movement, and prevent pain and formation of pannus.

The after-treatment consists in touching the granulations with crystals of copper sulphate every day or every other day and instilling, three times a day, a 20 per cent argyrol solution. The corneal complications are to be treated as they arise.

Mild cases require treatment for from one to three months; severe cases, from six months to a year.

Dr. L. Webster Fox, of Philadelphia, is convinced that trachoma is curable if the grattage operation and after-treatments are carefully carried out. The operation is seldom needed a second time, thus proving that re-infection rarely takes place. Dr. Jacovides, of Alexandria, Egypt, has performed the grattage operation over 15,000 times, and considers this treatment superior to all others.

When there is trachoma in a district, it is advisable to treat all cases of conjunctivitis, in order to clear up the acute inflammation so as to render the true nature of the trouble, if trachoma, evident as soon as possible. Under simple treatment an eye will clear up, if it is a simple conjunctivitis; and, if it is trachomatous, it will become quiescent.

In children with follicular conjunctivitis, treatment by expression should be employed, as one application of the forceps is usually curative, and a condition which must be regarded as predisposing to trachoma is removed. The reaction in these cases is usually slight.

In my work in LaMoure County, I have examined the eyes of 4,937 persons, and have found

133 cases of trachoma, or about $2\frac{69}{100}$ per cent and 320 cases of suspicious eye trouble. Many of the latter cases have been treated, and the original trouble is disguised. In addition to the detection of trachoma at the immigration stations, the U. S. Public Health Service sends officers to make trachoma surveys when requested by the state boards of health, and also operates six trachoma hospitals, one in Virginia, one in West Virginia, one in Tennessee, and three in Kentucky for the treatment of trachoma. Literature on trachoma is prepared and distributed free of charge, and an effort is constantly being made to inform the public relative to trachoma.

The eyes of all school-children should be examined at least every six months, and children with trachoma should be excluded from school until cured or until active treatment is instituted. Advice against the use of the common towel, soap, wash-pan, handkerchief, and sleeping with a person with sore eyes, should be given.

DISCUSSION

DR. C. E. SPICER (Valley City): The subject of trachoma, I believe, is a live one, and is one in which we should all be very much interested. There is no question in my mind at all about the cases that have been shown here as being trachoma, and anyone who has looked under a trachomatous lid would know they were.

Those border-line cases and the doubtful cases are the ones that concern us the most. Trachoma is prevalent, more or less, in North Dakota, but I have examined many hundred school children's eyes in and about Barnes County and have yet to find more than two cases which I call trachoma. Trachoma is a disease, as I understand it from my studies under various instructors, that prevails among adults and not so frequently among children. On the other hand, children are very susceptible to conjunctival irritations and follicular conjunctivitis in many of these cases of so-called trachoma with which we are concerned. I think it is absolutely wrong to diagnose follicular conjunctivitis as trachoma, which it is not. It is not only a slam on the country up here, but it sets a brand on the individual who is said to have it. There is no person any more interested in the eradication of trachoma than I am, but, if you raise up the lids of the majority of school children, especially those who have adenoids and tonsils, you will see these so-called granular conditions. If you have looked at the lids, you know they are there. These are the cases with which we are concerned. I think a few of those border-line cases should be shown, and a discussion on differential diagnosis brought out.

There are present a number of school children in the back room here, who are said to have had trachoma, so pronounced by one doctor or another. We have been looking at these children, and I cannot agree with that diagnosis. I think it is absolutely wrong to brand this country as being literally peppered with trachoma. I do not know how the rest of you feel about it, but I do not think it is treating the community right to con-

sider all these follicular conjunctivitis cases as trachoma cases, and treat them as such.

I have listened very attentively to Doctor Oakley's paper, and I agree with him in all but one or two statements. One of the statements is that follicular conjunctivitis can run into trachoma. I think this statement is absolutely wrong. They are two different diseases, and one will never run into the other. If you raise the lids of 75 per cent of school children, you will find, according to good authors, those granules, but that does not mean that they have trachoma. The differential diagnosis between these is sometimes difficult,—we will agree to that,—but it is a fact that many of these children who have been pronounced to have trachoma have not one single symptom of it, either objective or subjective. If you turn the lid over and find a few little elongated granules on the surface of the lid, mostly on the lower lid, and call that trachoma, I think you are absolutely wrong. If you would take the adenoids and tonsils from many of these children and put on glasses, perhaps give them a little zinc, the case will clear up. It is a self-eliminating disease, and that is the point I want to make. We should not declare that the country is literally peppered with trachoma, or this person or that one, or hundreds of others, are about to go blind. Many of these ignorant people are so frightened that they do not dare to come to town for fear they will catch trachoma.

Some of the best authors on this subject, as I understand it, claim that the chief distinction between these two diseases is in the fact that in children we rarely find trachoma, while in adults it is the contrary. This is the reverse of the follicular condition; and in the majority of these children the presence of granules in their lids is only a manifestation of a so-called hypertrophy of the lymphoid tissue, which is also found in the throat and where we find Luschka's ringed tonsils and adenoids; and, as I said before, to call this condition trachoma and say we have it here by the score of cases is absolutely wrong. Of the large number of cases in the anteroom which many of the doctors have examined, and nearly all of which have been pronounced trachoma by many doctors, there are only four that really are trachoma, and I sent three of them there myself as trachoma, and Dr. Rindlaub the other one, I believe.

The only point I want to make is that there is too much ado made about this thing throughout the country. There is not as much trachoma here as there is said to be; nevertheless we ought to be careful of those cases which we have on hand.

Now, what are we going to do about the cases of so-called trachoma? Should we quarantine them or should we not? I am not the health officer. I would like the health officer of the state to give a ruling on this to know just what we should do with them. Should we let them go about or make them stay in their own homes, secluded? If we are going to call all these cases of folliculitis trachoma, there will be a lot of people to quarantine. In the Litchville schools two-thirds of the children are said to be afflicted with trachoma, but I have not yet found a single case around Litchville, according to my idea. I have seen only one single case of trachoma in Barnes County, and have suspected two; but I have seen hundreds of the so-called trachoma cases.

That is about all I have to say about this—that we should be careful enough to take care of the real cases and not magnify the situation because that is a great detriment to the community. Personally I would just as soon have leprosy as trachoma, and I think the majority of you will agree with this estimation.

In regard to the treatment of trachoma. There is a difference of opinion. I have seen Dr. Fox treat hundreds and hundreds of cases. He is an extremist in one way. If you go to New York and watch the treatments there carried out at the Knapp's Clinic, you find them a little more conservative. There is no question about it, Dr. Fox has obtained good results from his so-called grattage or scraping, but it is only because he has increased the chances of the formation of scar tissue. You never can cure trachoma until you get scar tissue to replace the normal tissue—that is just as sure as can be. If we hasten it by mechanical manipulation, that will only hasten the growth of scar tissue.

I prefer to treat these cases in a rather more conservative way. I believe treating them with astringents is perhaps better for the patient than to go at it in a radical way to scrape the lid. I have seen trachoma treated in both ways with equally good results. I believe I favor the astringent conservative method of treating trachoma.

DR. G. GOLSETH (Jamestown): I arise to say a few words in defense of the State of North Dakota, and a few words in defense of the children of LaMoure County. The publicity given to trachoma is very extensive. Every paper says that North Dakota is full of trachoma. You can see it published in the papers of Fargo, the Twin Cities, Chicago, as far east as New York; and if this goes on North Dakota will be known as a state full of trachoma, not fit for the ordinary person to live in. I have had the privilege of examining at least two dozen cases from LaMoure County, diagnosed by the teacher, by the school nurse, by the health officer, and by the Government examiner, that is, the Government representative of the Public Health Service. All of them diagnosed trachoma, but only one single case was trachoma. As a matter of fact, the large percentage of these people had absolutely normal conjunctivæ. A few of them had other eye diseases, but the disease was not trachoma, and these persons were subjected to the most horrible treatment. I say, gentlemen, if anybody lifted my lids because he suspected I had trachoma, he would have a damage suit on his hands, and I know that a great amount of damage has been done to the children in these counties, especially LaMoure County, and some of the neighboring counties. Who is responsible for this?

In the paper of the essayist it is suggested that in these cases the mild treatment should be instituted, but in not one case, so far as I know, was the mild treatment instituted to find out whether the case was trachoma or not. In all those cases I saw, not one of the characteristics was shown which differentiate trachoma from conjunctivitis. There was absolutely no interference with the circulation. As the blood-vessels passed across the lids, passed from the cul de sac over into the tarsal plate; there was no interference between the granulations. It was a plain case of folliculitis, though some of them had a little conjunctivitis, in which case we should properly call the disease follicular conjunctivitis. I think there should be a stop put to

this improper diagnosis. This state should not be known as the state of trachoma. Why, it is scandalous. Patients tell me that many people have gone to Rochester for treatment. One had one eye removed, another has had both eyes removed, on account of trachoma, and I tell them all I do not think there is a case down there. Of course, I do not mean to say there is not a case of trachoma in LaMoure County. Certainly there are cases in every county, but I am talking about these children. Why did not the essayist bring some of these children to show, and not some old trachoma cases that have had trachoma for twenty years or more? Why were not these children brought here—the children who had folliculitis or follicular conjunctivitis?

I notice also,—I got my information from my patients,—the main diagnostician seems to be the teacher. If the teacher says that it is trachoma, everybody has to confirm the diagnosis. The teacher seems to be the final diagnostician.

In the definition of the essayist, he said that trachoma is contagious. I do not know whether it is or is not. But we will say, for the sake of the argument, that it is contagious. If it is, why did he not take those children out of school after he had made the diagnosis of trachoma? He made the diagnosis in these cases, and let the school go on just the same. If you have a case of scarlet fever, you say, "This is scarlet fever," and you immediately quarantine; but, instead of this, in this case the children remained in school, and therefore he must not have believed in his own definition.

Remember that there are a number of diseases of the conjunctiva that have granules. The presence of granules is not the diagnostic sign for trachoma. In order to have trachoma there must be hypertrophy of the conjunctiva; there must be all of those conditions. Later on, if you are careful in your examination you can get, at a very early period, the scar tissue, which is always formed, sooner or later.

The essayist said that many of these cases come on so insidiously that a person does not know anything about it. Possibly in a few cases this is true, but even in those slow trachomas, in the chronic form, the patients will, sooner or later, notice that there is something wrong—they soon notice something wrong with their vision. It is not possible to imagine that one can have hypertrophy of the conjunctivæ, even if it be in the lowest part of the tarsal plate, without being cognizant of it; so I think those cases are indeed very few.

The essayist in demonstrating the cases over here spoke of some as "slightly suspicious." I do not know what he means by that. We suspect something, we have an idea, probably you have nothing there. You might say, "I believe that people are all slightly dead," and that is correct, because, sooner or later, we shall all be wholly dead. If that is what he means by "slightly suspicious," that a case may become trachomatous, I might say that that case is slightly suspicious, otherwise not.

The main reason I appear here is not to criticize the essayist, but to make a plea for the children whose eyes have been damaged, to whom a permanent damage has been done which can never be effaced. I thank you. (Applause.)

DR. OAKLEY (closing): I haven't very much to add to my remarks. I really do not know how many cases of trachoma I have seen. I have not kept track of the exact number seen while on immigration duty. I have been on immigration duty three years, and I have been on these trachoma cases, off and on, for the last fifteen years. I have had immigration work at Philadelphia and Seattle, and I have been sent off on these trachoma surveys.

It is not new to me to have my diagnosis disapproved. That is to be expected, of course. I never saw a bunch of doctors that did agree. I have examined a great many children, and have found a great many cases in children from two to twenty years of age. In fact, most of the cases we get are not those chronic cases that any one can diagnose by turning back the lids, because the steamship companies would not let them come over, for each one means a loss of one hundred dollars to them. It is the doubtful cases that we can not diagnose on the day the ship arrives, and we have to watch them. I have seen a good many cases in children two years of age, but I have not seen any under that.

I have read you the facts about New York. In Philadelphia in one year I turned the lids of 71,000 people. I was there three years. The lowest number of cases we had in a year was 60,000. Out of the large number examined I have found a good many children that have trachoma in a mild stage, and we could not positively diagnose such cases the day the steamship arrived.

Since I have been here I have received word to investigate the conditions in Barnes County. Of course, you all know I am not here of my own volition, I am here by orders. I would just as soon close up shop and go home, but I am under orders to go to Seattle when I get through with this work. Naturally, I like the climate and country out there, and I like marine hospital work better than this. I am liable to make mistakes, but there is something in LaMoure County, I do not care who says there is not or who doubts it. I take fifty children, we will say, in a school, and I run along for fifteen or twenty cases and then find a case of trachoma, and Mrs. Schuck writes it on the board; and I find another, and she says, "This is a brother or sister of the first one." That shows there is something that is contagious, and whether it is trachoma or follicular conjunctivitis, it should be stopped, it should not be allowed to spread.

I thank you, gentlemen. (Applause.)

THE PRESIDENT: I am sure we appreciate Dr. Oakley's paper and appreciate his coming here to give it to us.

A NEW TENDON-TUCKER

By WESLEY BISHOP, M. D.
MINNEAPOLIS

The correction of strabismus by a tucking operation has appealed to me, but certain disadvantages apparent in using various forms of tucker have encouraged me to attempt to modify the procedure by supplying an instrument which, while simplifying the operation, promises accuracy in the attempt to procure parallelism of the eyes.

The performance of this operation under general anesthesia must, of necessity, entail more or less haphazard guesswork as to the result. To secure parallelism the co-operation of the patient becomes an important factor, and to this end the operation should be performed under local anesthesia; and it is here that operators have met with their greatest trial, the pain produced by tucking being sufficient to seriously interfere with the patient's attempt at fixation.

Again, the placing of sutures, with the shortened muscle tightly stretched against the eyeball, is not without its difficulties, especially when using certain forms of tucker.

The instrument herein described and illustrated, is simple in construction, easy of application, and eliminates the objections mentioned. Briefly, it consists of a double standard, each leg of which terminates in a cross-bar base to form the support of a flat hook, which operates between the standards, being raised or lowered by means of a thumb-screw.

Operation.—A few drops of a 4 per cent cocaine-adrenalin solution are applied at one-minute intervals.

As usual, the conjunctival and capsular flaps are dissected back, exposing fully the muscle to be shortened, and upon this a drop of 10 per cent cocaine solution is dropped.

The instrument is held perpendicular to the muscle, with the crossbars forming its base squarely at right angles to the edge of the muscle, the hook being under it.

To form the tuck the hook is raised by means of the thumb-screw, carrying upon it the muscle, as illustrated, thus raising a loop of muscle between the two standards. With the patient looking straight ahead, the hook is raised until parallelism of the eyes is obtained, then a 00 pyoktanin (20 day) catgut suture is passed through each side of the tuck at its base in the angle formed by the upright of each standard with its cross-bar base. The width of the standard separates

the sutures, and incidentally protects the central blood supply of the muscle. By reversing the thumb-screw the hook is now lowered, and the instrument is removed. The flaps are then sutured in place, and the toilet of the wound completed.

It is astonishing, after noting the discomfort produced ordinarily by the tucking operation, to watch the formation of the tuck proceeding with absolutely no complaint from the patient. This we believe to be due to the fact that during the formation of the tuck with this instrument the traction on the muscle is in one direction, whereas in the formation of the tuck as ordinarily performed this traction is in opposite directions.



Fig. 1.

The placing of the sutures is simple and accurate, as the upright standards offer no obstruction and the angle formed by each with its cross-bar base provides the determining point of suture.

When one prefers not to perform a tucking operation the instrument may be used to predetermine the position of sutures in making an advancement. In such case the instrument is placed with one standard directly over the insertion of the tendon, and a tuck formed until parallelism of the eyes is obtained. A suture is then passed through the base of the tuck, but going through only that side of the tuck farthest from the ten-

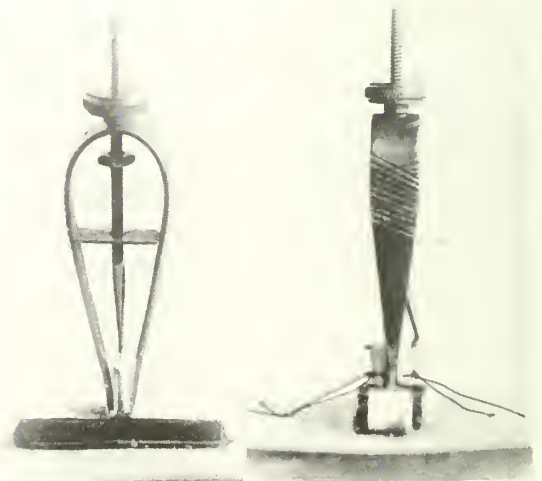


Fig. 2.

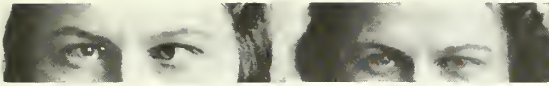


Fig. 3.

don insertion. The instrument is then removed, allowing the tendon to flatten out again. The distance between the tendon insertion and the

suture in the tendon measures the amount of shortening required.

The accompanying photographs illustrate an extreme case of convergent strabismus in which the left externus was shortened seven-eighths of an inch with absolutely no discomfort to the patient.

LETTERS FROM MINNEAPOLIS MEDICAL MEN AT THE FRONT

Every editor is pleased to be able to present to his readers letters from men which are written without a thought that they are to be published, for it is only in such letters that one gets the spontaneous thoughts of the writer.

The following letters are from medical men to friends at home, and, of course, they were not written for publication.

Only a few sentences of a personal character have been omitted from these letters.—THE EDITOR.

FROM CAPTAIN STEPHEN H. BAXTER

Surgeon of the 2d Battalion, 60th Infantry, American Expeditionary Force, France

My last letter was written September 10. I carried it about a week before I had an opportunity to mail it, so you may receive it with the same mail that brings you this one. So you see, even if I had written, you would not have received my letter any sooner. As a matter of fact, there was no opportunity for writing. From this you may infer correctly by matching up dates, that we have been in the "big push" which straightened out the St. Mihiel salient and which began on the morning of September 12.

I am sorry that I cannot tell you more about it, but, believe me, it was some experience. We reached the heights from which the preliminary bombardment was launched just in time for the opening chorus at 1 A. M., having been on the road since 7 P. M. On the stroke of the hour, "all Hell broke loose," and continued in one continuous drum-fire until 5 A. M., when our boys went "over the top," the artillery continuing as a barrage preceding the troops. My regiment was in reserve, and we followed a few hours later. In the meantime we were tired enough to lie down on the ground and sleep an hour or two, with shells of all calibers singing overhead from our batteries in the rear and with lighter guns barking all around. I did not know that there was so much ammunition in the world, and an old-fashioned Fourth of July was like a peaceful

Sunday afternoon in comparison with that morning. The Boche reply was feeble, and in the afternoon we went across No Man's Land and occupied the abandoned Boche trenches while the advance line continued far ahead.

As we were crossing No Man's Land, repatriated free civilians were already beginning to return, the first ones we met being two women with two little children; then prisoners began to trail back. Our men compelled the prisoners to carry the bundles of the French civilians, summary justice in a very small degree.

I slept in a Boche trench that night, weary and chilly and plastered with mud, but happy to be there and well satisfied with the results of one of the memorable days of my life. It was a wonderful experience. We continued to advance, as you know, and later took the place of the advance line regiment. And by that time the Boche had begun to stiffen his line somewhat, and we were under heavy fire. My station was at a reasonably safe place in a stone-quarry, but it was warm enough even so. That will make another chapter in my book.

Well, as you know, the drive was a success. All objectives were reached, and now we have come to the rear for a rest, weary, but happy. I am as eager to tell you about it as you are to hear, but we shall have to be satisfied, for the present, with a bare outline.

October 6, 1918.—No. 9 was dated, I think, Oct. 3, when I hurriedly finished my letter with the remark "more tomorrow," which simply illustrates the futility of human plans, for we left the next day, marched a few miles, and then took trucks for an all-night ride to "elsewhere." I tried to sleep on the seat, but rolled off once. The seat was hard, and the road none too smooth; and, altogether, it was a poor night for sleep. We arrived at our destination, and got settled about noon. We were on the edge of a town

which was already filled with troops, so we pitched our pup tents, and in the afternoon I got out some of your latest letters and mother's and had a good time lying in my tent and reading and napping. We expected to remain there over night, so, as soon as it was dark, I crawled into my bed-roll, lighted a candle at my head, and read for half an hour, going to sleep at 8 p. m.! another illustration of the futility of human plans, for at 9 o'clock an orderly came around, and said that orders had come to be prepared to move at once, so I dressed, got my duds packed, rolled up a blanket with my shelter tent, and the column was on the road at 10 o'clock. We hiked all night, arriving "here" at 6 o'clock this morning. The distance was not great, but it was a pretty tiresome trip. You may wonder what has become of my horse. Well, on the day of the big bombardment of Sept. 12 we had to leave the horses behind, and we marched on foot during the succeeding days while we were in pursuit of the Boche. We have had very little opportunity to use the horses since. For instance, we would have lost them again when we made the trip in trucks, and the horses would not have caught up before we started on this last march, and so it goes. One of the biggest problems of the army is that of transportation, both of men and materials.

If mother could only see me now! I am sitting on my pack in the shade of some bushes. My good clothes are "somewhere in France," and I have a uniform issued by the Q. M., and a Q. M. cap, decorated with braid of the Medical Corps to give it a little distinction, hob-nailed trench boots, and sheep-lined coat complete the picture, comfortable and appropriate, but hardly the same officer in appearance as the one who used to strut around with you down in Junction City.

I have already told you that we arrived at 6 a. m. I did not put up my tent, but just rolled up in my blanket, with the tent outside and went to sleep on the ground. My sheep-lined coat is one of my most-prized possessions, and makes a fine "robe de nuit" when sleeping out of doors, and with a blanket and a shelter tent for covering, I can sleep at almost any time and place. I washed and shaved this morning in a shell-hole which was filled with rain-water. The soil is clay and holds the water in the shell-holes for a long time. I felt much refreshed after the shave and wash in cold water.

There is quite heavy cannonading going on several miles ahead of us. The report came from

brigade headquarters this morning that Germany and Austria had asked for peace on President Wilson's terms. It is probably incorrect, but in any case it will do no harm for the American gunners to send over all the peace arguments they can. Maybe the Huns are not yet quite anxious enough for peace to ask it without some trick or treachery, and the best way of persuading them is to keep pounding away with all the artillery we have. The main thing is to be sure the terms of peace are right, even though it takes a little more time.

October 8.—Of course, you can see that we are still in the shell-torn woods, where we had just arrived when I wrote, October 6. For the past two nights we (the Battalion officers) have slept in a dugout left by the French, and have been reasonably comfortable, dry, at least, and warmer than if we were out in the open. I sleep in my sheep-lined coat and sweater (the one mother knit for me) with my blanket wrapped around my legs, so "get by" all right. On account of lack of transportation, our bed-rolls were left at our last stopping place, and we shall probably not have them again until the present move is completed. But don't worry, we are becoming quite well-qualified hoboos, and don't worry much about a little thing like weather.

We have been all keyed up and excited the past two days over the peace talk. Of course, it is probably mostly talk, but it seems pretty persistent, and even the French who have come to regard the war as almost a normal condition, a business, are talking of the possibility of an early conclusion of peace. Well, the morale of our troops could not be better, and, whether it be peace or another drive to enforce peace, they are ready for whatever comes. It has been a rather dismal day, with showers, a little sunshine, a little hail, and mud, but, in spite of all that, the men were just now cheering over I don't know what, probably "seconds" on beans, so there seems to be something in the air that makes everybody feel good, and maybe there is something in this peace talk after all.

We are to move on short notice, so I shall finish my letter now and have it ready to mail when there is an opportunity.

I won't guarantee that the straw in this dugout is "cootie"-free; in fact, some of the officers think they've got 'em. I think I've escaped so far, unless my hide is getting too tough to notice such small things. Anyway, if I promise to go through the de-lousing process and obtain a cer-

tificate of health, in that respect maybe you will let me come home when the peace talk comes true.

FROM LIEUTENANT WARREN BELL

Lieutenant, British Expeditionary Force, Medical Corps

September 19, 1918.—Last night, as I stated, I felt, for once, I was worth my keep. I retired early, was asleep by ten, and did not awake until seven. I changed places with a Canadian and was under the same roof as the lieutenant colonel, two padres, and a major. The English certainly are a hospitable crowd. It was one of the dear padres who gave me those two envelopes. These priests certainly do their part in the war, and they go way up in front where it is dangerous. Now we are not so busy, and I can tell you more about yesterday. You see, it was the day of a little "push" on the part of the units with which I am connected. Naturally, the ambulances require more help, and I was honored for the occasion.

A team to work quickly requires two stretcher-bearers to lift patients on and off the table, one man to give antitoxin against tetanus (this man is a dresser, not an M. O.). The serum is given with a sterile needle and syringe under the skin in the breast, because there is room to get the 5-10 c.c. in there without too much pain. One man, also a dresser, cuts off the dirty dressings. The medical officer then sponges off the wound and area around with a solution of ensol, composed chiefly of chloride of lime, and then, if necessary, picks out projecting bits of shrapnel or takes a stitch. Then the dresser puts on a piece of gauze soaked in some solution; and a large piece of cotton wool, like rough absorbent cotton, is put over the whole, and bandaged in place. All the latest first-aid splints are available and also special bandages for special parts of one's anatomy. Any one in pain is given a fourth gr. of morphine subcutaneously. Cases are at once sent back to the casualty clearing station.

Besides our own wounded, we had a certain number of Jerry prisoners, whose wounds had exactly the same care. Personally, I think I must have directed the treatment of about thirty cases, or even more, yesterday. The Jerries that I saw all seemed well fed. During a rush, broken legs, penetrating wounds of the abdomen and chest, moderately large gunshot wounds, etc., are classified as slight cases. Accidental amputations and eviscerations, collapses, and such are considered severe. The advance yesterday was

considered a success, and the fact that we are now out of the sound of the guns will convince you that it was no small one. The night before last I was kept awake a large part of the time by a "heavy," which was booming away close to us.

Now, to say just a word—

I was just interrupted to watch a surgeon treat a badly injured skull. He shaved the scalp so carefully, and put the head at rest (immobilized it like any compound fracture). The other case was an injury between chest and abdomen.

This A. M. it is very windy. I got up at seven-thirty and took a cold bath out doors, then shaved and had breakfast. The meals are fine.

One of our men who just came in the ambulance and was in bad shape was the object of much sympathy. Some one said, "Did you spend the night in a shell-hole?" "No," he replied, "I couldn't find one."

A shell-hole is considered safer than flat on the ground. One medical officer saw an injured man who had been fed in No Man's Land by a German corporal for sixteen days. The Corp. had lived in England all his life.

I am getting so sick of tin hats and dugouts that I will really be "fed up" by next spring.

October 4.—Now, I am not to be allowed to have the sick report at my room, but must ride around to the camp to see them. However, I shall do it early every morning, and get it over with. I told you I am wearing spurs now.

We just heard that Turkey has surrendered. I can't believe it though. Now, I am through for the day, and shall settle down for a little read this afternoon.

I heard a few nasty big shells passing over my head this morning.

October 5.—I feel much more cheerful than I did last night. In the first place I went to my wagon lines before breakfast. One of the batteries had not followed directions well, so I just rode off and left them. Then I went to all the other wagon lines. There was a little nasty shelling going on, but I got by with only a bit of a scare. Then I came back to the column, had a good breakfast, shaved, and saw the column sick. Then I had my lunch put up in a newspaper, took some chocolate, and started on a lorry trip. I wanted to see a new Division Director of the medical service. The directions I had proved to be faulty, but I did a bit of detective work and found the true location. I told him most of my griefs, and he was extremely sympathetic and

gave me lots of good advice. Then he asked me to tea, and I accepted with robust thanks, and we have a little social time. During the present operations I am supposed to be battered and bounced around. It occurs to me that even at added risk to myself you don't want me to shirk my work, but to do my utmost to give satisfactory medical care to any sick or injured men in the unit.

I ate my lunch alone on top of a hill, and thought of you and wished for you, and read a little French. I was fortunate in getting a ride to the corps, but had to walk part way back. However, when I did ride one balloon lorry went very fast. Well, I got back to the unit at 7 p. m., or 19 o'clock and found that the B. A. C. had moved, but according to pre-arranged plans, McCall waited with two horses to show the way. I got in at 19:30, and had supper or dinner, made arrangements to see the ration dump during the a. m., and wrote this to you.

October 8.—We are on the move some more so I will write this now that I have a few minutes. That Scotch medical student turned out to be of Irish descent. He will be posted to a battery I suppose. We had a grand sleep, and breakfast in bed, then I went on horseback to find the wagon lines. They were not in the same place so I only could find two of them. Then I returned to the B. A. C., and we shall soon be on the road. I suppose I rode ten miles this morning and shall do five this afternoon. The grub we get now is simply excellent. The food and sleep are excellent, but my work is rotten. However, it seems that it has to be done.

Whitberd is very good about getting me all packed up. I never have any bother at all. There are some men outside now, waiting to occupy the dugout as soon as we move out.

Many people are hoping for peace now, before Christmas. I would be the happiest man in the world if that were the case. I believe I would want to come right home. Things certainly look the best that I have seen them.

You will enjoy reading this letter when you know it is written on top of a tank. The tank has been wounded and is dead; and as we were obliged to stay near by for lunch, I took a few moments to write to my girl. I had the most hideous night last night because Fritz had a large number of planes over our heads. No bombs dropped very near, but we thought they might. My, but I was glad to see daylight again. We are more or less on the go all the time now,

and it is difficult to find the wagon lines, and, when I do, nobody is sick. People here are more and more optimistic about a speedy end. It is a pleasant thought, but we must not dwell on it until it is more of a certainty than at present. Since early in August the fighting has really been in earnest. There is so much I should like to tell, but dare not.

The country here is beautiful, and the weather has been unusually fine. I am extremely well fed, and usually comfortably housed. It was my intention to sleep in this tank tonight if we did not move on, but the horses are in the harness at this minute. There is very little opportunity to read these days, and that adds to the monotony of the job. However, the scenery changes often enough. I never knew before what crowded roads meant, nor how much a little supervision helped. Here we go.

October 9.—I am all in bed and very cheerful. This a. m. I got up late, after an excellent night's sleep. I had breakfast and then went on horseback to the various wagon lines. I started from here at 10:10 and did not get back until nearly four p. m., or 16 o'clock. Incidentally I got near more shell fire than I like. I left the horses at a certain valley by a clump of trees, and went on foot up to headquarters. I had no tin hat so had to put on a Boche hat. I guess we just got away in time to avoid the heavy straffing. I got lost, and went back to the wrong valley and woods and couldn't find the horses for some time. There were only a few men who went sick, so I practically had the trip for nothing. There has come a Scotch medical student to the unit, and we are having a bit of a chat at this moment. The war news still continues to be excellent. It does look as if there might be a conclusion soon. I surely hope so. The outdoor air makes one very sleepy. I am reading French with a dictionary now. I didn't get any mail from my girl today, but I know that I have had many more than one a day, and I do love them so. Please don't think I am egotistical to be writing so much about just the little things I do; it is about all I am permitted to say. Kaiser Bill's attitude seems a bit more humble now than it did about six months ago.

October 10.—We don't even know for sure what the date is. We arrived at our camping ground just before dark last night, and I had the honor (??) of sleeping in a shell-hole with a piece of canvas stretched over me. As a matter of fact I expected more bombing, but it was

very quiet, and I had a good night's sleep. My head was directly under a small hole, and when it rained I got a constant trickle. However, it only rained enough to keep the Hun planes away. There have been plenty of dead lying around in the areas we have been in the last few nights. Last night there was a poor dugout available, but it smelled so foul that I preferred the shell hole. I did not get up until nine, had breakfast in bed and was on the parade at 11:00. Today we more or less played the part of the conquering hero. We have passed into an area where towns are no longer shelled to bits, and have reached beautiful fields under cultivation. I saw the first beet today that I have seen for a year. I am commissioned tomorrow to buy vegetables for part of the troops. In passing through some villages where there were French civilians freed for the first time in four years they were very glad to see us, and bowed and took off hats and cried "Bon Messieur."

I feel as though this maneuver of the Allies is the biggest battle ever fought in history. I do hope it is successful. Sometimes even sedate old me gets my sporting blood up to the point of being willing to sacrifice a little for our cause. On the whole, though, I am a bit too careful of myself to be a good soldier. This afternoon I went to see all my wagon lines and just got back by dark. This evening, although it is raining again, I am sleeping in another shell-hole. The air is better, and there is less likelihood of any traps. We have a small little mess and feel in great spirits over the way things, as a whole, are going. I took two very short rides on Parson's motorcycle today, and hope to make myself familiar with it in a few days. This evening I have had

a fine dinner and a good talk with the Vet. about diseases of the animal world. Tonight I shall leave my clothes on, but will change into night-socks. In this condition I can make a quick get away if necessary.

October 11.—I slept in my shell-hole all right last night, and had a good sleep, barring the fact that the shell hole shook every time a big gun near by went off. It rained a bit during the night, also a lot today. I visited all but one of the wagon lines this A. M., and saw the sick of that one at the B. A. C. I did not buy any vegetables, as some carrots were issued. Then all afternoon and evening I have been in a little house reading in my French book. The interpreter is back, well, from a visit to see his girl. My latest patient is the Vet., who got a bad kick from a mule. He was in severe pain, and I had to give him a little morphine. I am afraid one of the condyles of the femur is broken.

One of the officers has barber's itch. Barring these we have few patients. This morning I got a notice that my O. B. book, by Jellett, had been shipped to me. I suppose I shall get it soon. Tonight, because of the Vet. I have moved my bed into a house where the Capt. slept last night. The windows rattle fearfully when our guns fire, and that may reduce my sleep somewhat. Yesterday I lost my gas-mask, and had to get another one. A third of October is gone, and soon the Fall will have scampered away. Sometimes time hangs very heavy on one's neck. Today has seemed to go fairly fast, and, believe me, I wish we were together. I liked Wilson's reply to the Kaiser's peace "knot." Out here night is only an accentuation of the disagreeable day.

HOSPITAL DEPARTMENT

CONDUCTED BY G. W. OLSON

Superintendent of the Swedish Hospital, Minneapolis

CAN THE SMALL HOSPITAL MAINTAIN A TRAINING SCHOOL?*

BY GEORGIA H. RILEY, R. N.

Superintendent, Montevideo Hospital
MONTEVIDEO, MINNESOTA

Schools of nursing were originally founded for the very definite purpose of training women for the skilful care of the sick and injured. Many

influences have had a tendency to obscure that purpose. Doubtless much of the time spent in the cleaning and dusting of wards might better be spent in the actual care of the sick.

Too much emphasis has been placed on the number of beds in a hospital and too little on the quality of the actual nursing and the instruction given. The individual instruction given student nurses in these schools is invaluable, provided the instruction is given systematically and by one or more nurse instructors having good

*Presented at the First Annual Conference of the Minnesota Hospital Association, Minneapolis, June 27-28, 1918

teaching ability. Also the physicians in the community must be well-trained and active men, willing to co-operate in the instruction of the nurses.

As the nurses from the training schools of larger centers apparently do not go into the smaller cities to practice their profession, the smaller hospital with a training school seems to be the only solution of the problem of good nursing in small towns and rural districts. High-school graduates should be secured, and a high standard of nursing and instruction maintained.

The system of hospital nursing which has stood the test of more than half a century is that of student nursing care under suitable supervision.

The citizens of every community should, and usually do, recognize their responsibility for the care of their sick; therefore, the manner in which the sick are cared for should be equally a matter for their active interest.

The Surgeon General is calling for graduate nurses. The only source for obtaining these nurses is through the training schools. This year every hospital training school should be filled to capacity. Teaching and housing facilities should be increased in every accredited school, in order to meet the need. Nowhere is there greater opportunity for rendering patriotic service.

This means, indirectly, that every small community should improve its hospital, and, if affiliation does not exist, now is the time to bring it up to the accredited grade. Every pupil nurse should be eligible for registration. After three years' service in the hospital this is due her. These registered graduate nurses should come back to their own community, and build solidly the State's nursing resources, instead of permitting unaccredited hospitals to exist and ignoring them.

The health of the rural population must be maintained, and infant mortality reduced. It is apparent that this can best be accomplished by a group of kindly and well-trained pupil nurses in the community hospital. Every community has a right to have a hospital, and, when small, to see to it that it is a good one.

During a period of two years a pupil nurse will have had the care of a patient from the beginning of the illness until convalescence is established. This is of more value to the nurse than the care of many patients during one stage only of a disease. The third year spent in a large city hospital will give the necessary training in the

laboratory work and clinical aspects of many cases.

The individual instruction and constant supervision with follow-up instruction possible in the small hospital when well conducted, must be of greater value than instruction given large groups in the large hospital. Also the opportunity to develop individual responsibility in the pupil of the small training school is greater than in the large hospital. Here, responsibility is shared with a number, and its force is consequently lessened and more difficult of development.

Obstetrical work should be provided for, and the pupil nurse taught to manage a normal labor and care for the new-born infant. In small and isolated communities this is the greatest field for service.

A small general hospital in a thriving community having a good school system, with an active and well-equipped staff, and an equally well-equipped and energetic nurse as its head, can, and should, maintain a training school for nurses. Affiliation should be secured with a large hospital in a nearby city, and every effort made to cover as much of the theoretical work as possible in the two years, thus giving the pupil a greater opportunity to observe and study the cases which will come under her care. If this can be done the superintendent of the city institution will be enabled to give these pupils some training in social service, school nursing, public health, and industrial work. Special work in care of infectious diseases and the care of children can also be given.

THE TRAINING OF PUPIL NURSES FROM AFFILIATED SCHOOLS*

By LOUISE M. POWELL, R. N.,

Acting Superintendent, University of Minnesota
Hospital

MINNEAPOLIS

I have been asked to give you the benefit of my experience in the training of students who have started their course of training in another school.

When I took charge of the School for Nurses of the University of Minnesota, in September, 1910, I was faced with the problem of opening a 120-bed hospital in September, 1911, with a training school that numbered fifteen students. Obviously, this was an impossible thing, so I looked about for ways and means by which I could provide nursing care for the hospital until our school

*Presented at the First Annual Conference of the Minnesota Hospital Association, Minneapolis, June 27 and 28, 1918.

should be adequate, with the following points in mind:

1. To offer to students something which they could not get in their own schools which they really wanted and needed.

2. To give this work only to those who would use it as means to enable them to register, and who would be eligible for registration because of it.

3. To maintain our standards for our own students.

4. To keep within our budget.

It was neither desirable nor practicable to use graduate nurses entirely, so we compromised on using such graduate nurses as we must, and offered an affiliating course to such hospitals as needed what we could offer.

I was so uncertain that first year whether we could give the students a course that would justify the time they would put into it, and we so badly needed them to do the work, that we paid them \$10.00 a month, stating that, if we found the course could be given as we wanted to give it, no remuneration would be given after that. We had nine students from St. Mary's, Rochester, all of whom registered at the end of the course. Since September, 1911, we have had sixty-one students representing thirteen schools. Of this number two have been returned to their own schools during the year, when, after giving them a fair trial, their work has been entirely unsatisfactory.

Since that first class no remuneration has been given. These students come in on the same footing as our senior nurses, take senior classes, and do senior work after the first few weeks if they can qualify for it. The students who have no executive ability are given work that will fit them for the work they are better qualified to do, more individual care of patients. We try to give them, as far as possible, the things they have not had in their own schools.

We have not, up to this time, required the high-school diploma of these students. As the number of applicants for our own school increases, however, and the number of the students that we can take gets smaller, we shall probably have to give the preference to the better prepared women.

Our method of admission at present is as follows: If a student writes that she has had a certain length of time in a certain school, and wishes to finish the three years with us, I send her a blank, which, when filled in, contains certain in-

formation, such as age, previous education, professional training, subjects in which further training is desired, and date the student wishes to enter. This is signed by the student, the name of the former superintendent of nurses being given. If she is from a school from which I have not had students, I then refer the student to the State Board of Nurses Examiners, and have them state how much additional time will be required and whether the student will be eligible for examination when she is through. I communicate with the former superintendent, and, if I have a vacancy, accept the student for a probation period, usually of one month. From this Fall we are requiring that the student shall meet the Training School committee as our own students do. We do not accept a student who entered her own school younger than our own students enter,—that is, under twenty years of age. Only two exceptions to the rule have been made in the past seven years.

The hours of these students are the same, of course, as our own. They have usually one period of night duty during the year, with a short time on night duty in obstetrics.

If a student is to spend a year, we furnish a full set of uniforms like that of her own school. During the past year we have had five students, who not only have been paid nothing, but have themselves paid for their room outside, in order to get the work. It was impossible for us to house them at the time they applied.

I have found these students, almost without exception, earnest, appreciative, and conscientious. Most of them lack the preparation our own students have had educationally, but we have had some fine women who have done good work, and at present four of these women are employed in charge of departments in the hospital.

I feel that the slight amount of extra trouble that is entailed in planning for an outside group, is fully repaid by the results. There have probably been a few cases (only one has come to my notice) of students who claim to be University nurses, but this is rare.

I should be very sorry to have to discontinue these affiliated courses. As a State institution I feel that the smaller schools in the state should be able to count on us to help them maintain their schools; however, with our present facilities we are limited to a small number. I should certainly commend the practice to some of the general hospitals which have not tried it.

THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
 The Official Journal of the
 North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. - - - Aberdeen, S. D.
 H. J. ROWE, M. D. - - - Casselton, N. D.
 H. E. FRENCH, M. D. - - - University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription - - - - - \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange - - - Minneapolis, Minn.

DECEMBER 1, 1918

WHEN WILL THE DOCTORS RETURN?

The question of demobilization of the home and foreign soldiers is a most engrossing one. We can readily see that many of the men who have been in service in France for a long time may be returned to this country, but it is not quite so clear as to when the men in the cantonments in this country will be returned. The press reports are rather conflicting: one day we are informed that demobilization will occur at the rate of thirty thousand a day, but, at best, it must be a long and tedious process, and probably will resolve itself into the early return of men who have left business or occupations which demand their presence. This applies to a variety of vocations; but does it apply to the medical men who are numerous scattered over the United States? Undoubtedly, many wish to return; and, yet, when we think of the shortage of physicians and surgeons in Europe, it seems quite probable that many medical men will be sent from this country to help out the restoration and reconstruction of the devastated regions. This may call for a large corps of sanitarians; and, no doubt, many who are engaged in special lines of work may be asked to take up this special and, perhaps, to many of the physicians, new work.

Then, too, it is quite likely that the demobilization will unearth a good many sick soldiers, either in camp or coming from abroad—not men who are seriously wounded and who need reconstruc-

tion aid, but those who are sick, who break down following great strain and excitement.

The need of doctors is appreciated much more in France and England than we are aware of, and already the English universities have offered university courses to prospective medical students, including all men who have been in the service for more than six months. This attractive offer will doubtless appeal to a number of young men who are inclined to medicine. The opportunities that France and England offer to them is almost unparalleled. The offer, too, is not only a generous one, but a very necessary one, for England has been depleted of its doctors, particularly of the young men and even those up to forty-five and fifty years of age. It is, therefore, necessary that the schools begin as soon as possible to recruit candidates for medicine; and, if the report is true that many of our soldiers are planning to live abroad, students may offer themselves very freely, provided there are not too many obstacles in the way. Foreign countries, as a rule, demand a good deal of preparation for medical men before they are admitted to the medical schools; but, if this barrier is suspended, the offer will be a very acceptable one to the candidates.

The same reorganization and repopulating of medical schools in this country are imperative; and it is a wise thought on the part of the War Department to encourage medical students to continue their work. The University of Minnesota and its medical school will appeal to a great many men from the Northwest, and doubtless will include some who have been partially disabled in the war.

A man with a limp arm, or an arm which is not up to full service can become a successful medical man, and many, of course, will be able to go into surgical practice. These men should have a very broad view of life and of the new profession into which they are planning to make their entrance, and we shall all have to become accustomed to seeing partially disabled men in our medical classes.

The disposition of the medical men, so far, has not been made clear by the War Department, or by the Surgeon General's Office, and we shall have to wait until further orders are issued to arrive at any practical conclusions.

In the meantime the people are adapting themselves to a shortage of medical men in the larger cities; but the crying need for service in the country is greater than ever, and in its wisdom the Surgeon General's Office may see fit to rehabilitate the small towns by a return of the medi-

cal men to their former centers of practice. The epidemic of influenza has done very much to clear the situation; there are still many towns and vicinities that are overworking their medical men, not only medical men but civilians as well. This same problem is presented to the nurses, and from our reports from the country it is quite essential that more nurses be returned for necessary duty.

THE RELEASE OF DRAFT BOARDS

It is quite evident that the work of the Local Boards and the Medical Advisory Boards has come to an end, thereby releasing many doctors, not only in the cities, but in the country places, from the long hours which they have given so freely and gratuitously to the Government. On the whole, it is believed that all of the men have felt an interest in the work, and have attended all meetings as far as humanly possible, and have materially assisted the Government in placing a satisfactory army in the training schools of the Government.

Some man who talked before the medical men of the different boards said, in all candor, that the Medical Boards, particularly the Local Boards, were responsible for the induction into service of a multitude of high-grade men, and in the reports that we get from overseas, from men who have been in close touch with the situation, we have been told by the army officials of the English, French, and Italian nations that they never saw a finer class of fighting men. One story relates the experience of the opposing armies who were in the trenches, that at a signal all fighting ceased for one or two hours and that the men sat on top of the trench piles, smoked their pipes or cigarettes, and conversed in loud and audible tones with the enemy not far distant, and that at the expiration of the siesta both sides began shooting at each other again; but, when the American army arrived, they looked upon such procedure as unbusiness-like, and they proceeded to inject a spirit of Americanism into the fighting, so that these brief periods of rest and conversation were omitted. The Americans had been sent over there to fight and they infused the other armies with the same spirit and succeeded in helping attain the final cessation of hostilities. This spirit, of course, was rather a surprise to many of the European soldiers. They could not understand the anxiety, the hurry, and the grimness of the American army; their willingness to

go into all sorts of dangers; and their desire to fight with all the ardor of young manhood.

We hear a great deal of the work of the American soldier—how he has transformed the ideas of England and France, and has changed them from indifference into profound admiration. When the American goes in for a piece of work he puts every ounce of energy into its accomplishment, and when that work is done he plays as frankly and openly as any other full-blooded man would.

After the first installment of this new army appeared in England there was a change of feeling toward the Americans. They had been looked upon as almost impossible as active fighting men, but the determination which they showed when they landed from the steamer and marched through England produced the desired effect. The English people, who were usually rather reserved, did everything in their power to make the welcome of the American army one of friendship and admiration. The boys have been entertained in English homes and at various public places, and in this they have cemented the friendship between England and America.

The same spirit of cordial relationship is found in France and in the other fighting countries. One thing that has endeared the American soldiers to the French people is their love of children. They make a great deal of the French children, and they showed their appreciation of the difficulties and desolation in French and Belgian towns, and thus very soon warmed the hearts of both of these countries. It is said by one of the lieutenants that this spirit of Americanism and of home feeling has done much to keep the boys up to a right moral standard, and there is no doubt that the American army has, as a whole, preserved its morality, as well as its morale.

The demobilization of this great army will, doubtless, take a good deal of time, and it is quite probable that the Medical Reserve Corps will assist greatly in this demobilization plan. Many, perhaps, will be returned to their former training camps, and many will be sick and need the attention of physicians and surgeons; but, in spite of this, we are looking forward to the time when the men will be restored to their homes and occupations, and the doctors will come back to their home work.

What will be their attitude towards things and people, is the question that has been frequently asked? How will they adjust themselves, after such a strenuous life among men, to the ordinary humdrum life of the practitioner? That they

will do it is undoubted, but to see how they will do it will be interesting.

One should not forget that the men who have stayed in this country have done a great service, and they should rank both in sentiment and in feeling with the men who have seen service abroad. One of the problems which we are going to meet is the army regulation rank. Are these men to be looked upon as army surgeons, or will they drop their titles and become doctors and surgeons? The latter would seem to be the best solution of the problem, although one should not lose sight of the service they have rendered, the sacrifices they have made, and the good work they have accomplished. Let every community and city welcome its men home, whether they be privates or officers; but we particularly should, as a profession, welcome our doctors home and see that they are recognized, and their patients are returned to them, and we should do everything that we can to promote the spirit of cordial relationships between the doctors in army life and those in civil life. Now is a good time to eliminate all cliques, and the sooner this is accomplished the better the entire profession will feel.

PUBLIC HEALTH SERVICE

The time is not far distant when the Public Health Associations will become nationalized. The postponed meeting of the American Public Health Association, which meets in Chicago December 3, 1918, will doubtless consider problems which interest the public, and which will show the capabilities of public health service men. The men who have been abroad and have seen the insanitary condition of cities, and particularly those which were destroyed, will probably influence the deliberations of the American Association. We shall have a little broader idea of public health service, and shall see the inestimable work of those who are engaged in the sanitary corps abroad in teaching the necessities of clearing up all dangers from an insanitary condition. Of course, in Europe many of the towns were very old, and have always been insanitary; but this same statement applies to many towns in the United States, and when the time comes we who are living in a supposedly advanced sanitary age, will be given instruction and will follow the example of the sanitarians who have improved conditions overseas.

Why should we not urge upon the President or Congress the necessity of having a cabinet

officer who will have charge of public health work? This effort has been suggested from year to year and, so far, nothing has been actually accomplished, although the Public Health Service in Washington has done tremendous things; but they could do many more things if a cabinet officer became the advisor of the President in these matters. Just how to go about this problem is a speculative matter, and, unless the President of the United States can be induced to include such an official in his cabinet, any attempt to flood Congress with letters from doctors will accomplish but little. Still the idea should be kept in view and should be urged upon the President through proper officials, and particularly should be urged by the men who have been in sanitary service abroad, because they will have arguments to present from accomplished results.

A member of the cabinet, who has health matters under his supervision, should be in close touch with the War Department, because this department will have the work of reconstruction, reorganization, and rehabilitation to deal with. It has been demonstrated, even in Minnesota, that, when insanitary conditions prevailed, owing to disasters, a health officer backed by soldiers succeeded where all other efforts failed; and it should be the duty of the returning sanitarians to concentrate their efforts upon this problem.

This public health department may be widened out in many directions and cover many fields, and perhaps eventually lead to a just paternalism in medicine.

CORRESPONDENCE

WHY SOME PUBLIC MEETINGS ARE NOT PERMITTED

TO THE EDITOR:

As you have been president of the State Board of Health for a number of years you can perhaps explain why the Executive Officer of the State Board of Health will not permit the annual meeting of the Minneapolis, St. Paul & Sault Ste. Marie Railway Surgical Association in Minneapolis on December 3d, while the churches, theaters, schools, football games, and other assemblies are permitted by the Board.

I can conceive of no reason for Dr. Bracken's prohibition of the one meeting and his tolerance of the others; and the problem is further involved by the fact that physicians and surgeons know how to guard against all possible dangers

inherent in an assembly of this kind while laymen do not.

I enclose Dr. Bracken's letter, and I may add that Dr. Guilford, the Minneapolis Health Officer, gave his consent to the meeting.

Very truly yours,

J. H. RISHMILLER,

November 20, 1918. Secretary-Treasurer.

This letter was referred to Dr. Bracken and the following is the reply received from his office.—THE EDITOR.

November 23, 1918.

Dr. W. A. Jones, Minneapolis, Minn.,

DEAR DOCTOR:

Your letter of November 21st addressed to Dr. Bracken is received during his absence in Washington.

I do not see how Dr. Bracken can very well overrule a regulation passed by the Board at its special meeting. The fact that Dr. Guilford is willing to overrule this regulation prohibiting public meetings and also pays no attention to the regulation prohibiting public funerals does not seem to me to have much bearing on the situation.

The influenza epidemic is still going merrily on in the northern section of the state, particularly on the Range, in spite of the fact that the newspapers insist that it is abating.

This letter, however, contains my personal opinions. Your communication to Dr. Bracken will be brought to his attention when he returns and he will doubtless communicate with you further at that time.

Very truly yours,

C. E. SMITH, JR.,

Assistant Secretary.

MISCELLANY

THE REPORTING OF VENEREAL DISEASES

The Minnesota law requires that every case of syphilis, gonorrhea, or chancroid be reported to the State Board of Health.

Reporting started August 1, 1918. During August 620 cases were reported by 137 physicians; during September 625 cases were reported by 94 physicians; and during October 538 cases were reported by 106 physicians. There are approximately 2,000 physicians in the state, yet

only 215 have reported cases. Are you co-operating with the Government, or are you a slacker?

Minnesota's allotment from the Federal Government to fight venereal disease is \$22,560.00; 10 per cent for administration, 50 per cent for treatment of patients; 20 per cent for educational work, and 20 per cent for investigating and prosecuting violators of the law. Will the Government be forced to spend some of this last 20 per cent on you, or will you help us save it to spend in a better way? Insist on your patients reporting sources of infection to you. Report delinquent patients. The Board can do something with these cases, and is handling over a hundred a month.

Use the free laboratory service; write for proper containers.

Assistant U. S. Surgeon General C. C. Pierce writes this on the subject.

REPORTING VENEREAL DISEASES

A recent instance illustrates a point of view which has occasionally come to the attention of the Public Health Service. An elderly physician, who is a leading dermatologist and syphilologist, a professor in the school of medicine of the State University, and a leading man throughout the State, told one of his classes that he would, himself, never report a case of venereal disease, and advised them never to do so. The intelligence, ability, and patriotism of this gentleman are not for a moment questioned. But it is equally certain that he made a profound error in judgment, which, were it to be made general, would have the most serious results at this time.

The older physicians were trained as young men in a school of medical ethics which was extremely individualistic. Social medicine, in common with most social work, had not yet developed. The rights of the individual patient counted for everything, the rights of those about him for nothing. With the development of the modern social spirit this has of necessity greatly changed. The acute contagious diseases were the first to be required to be reported. There was opposition to this among the physicians of twenty-five years ago because they felt that the rights of their patients were being infringed upon. Public opinion, however, sustained the eminently wise measures which made it compulsory to report these diseases. Later typhoid fever and other diseases whose communicability was established were added to the list of reportable diseases.

Still later, tuberculosis was made reportable, and very great opposition at once developed. This was in part because of the chronic nature of this disease, which made the patient for a long time an object of solicitude and attention, and in part, because in those days, when the disease had advanced sufficiently to be recognized, it usually terminated fatally. This had given a certain stigma to the disease in the minds of the laity. Physicians therefore felt very strongly that to report a case of tuberculosis was to trample upon the patient's rights to conceal his disease from the public. We know that this has not been the result. In the average community, and especially in the large cities, very few persons who would not have known even if the case had never been

reported, find out that a man has tuberculosis. The rights of the individual to keep his affliction concealed from the general public are, therefore, still carefully safeguarded and preserved, and at the same time the greater rights of the community to be protected from the infection are also safeguarded and preserved.

Public opinion has advanced to the point where it insists that no man has the right to endanger the lives or happiness of other persons. This has been proved true in the financial world as well as in the medical. This trend of public opinion is maintaining itself consistently and will never change so long as society continues to go forward.

The requirement that the venereal diseases be reported as are other dangerous communicable diseases has met with opposition in the same quarters where the reporting of tuberculosis was fought. But it is generally recognized to be a sound public-health measure, and as such has now been enacted into law in 32 states. It is to be strongly emphasized that in reporting these cases the right of the individual to keep his disease from the public eye is carefully safeguarded, even more so than in the case of tuberculosis. In most states the names and addresses of the patients are not required unless their conduct makes them a danger to the public health, or they stop treatment before they are made non-infectious. In the former case the public welfare requires legal action; and in the latter case it is to the patient's own good that he or she be compelled to complete the course of treatment. There is no question but that public opinion will sustain this measure, and all other reasonable measures for the control of the venereal diseases, as soon as the people generally are well informed on this problem. Every physician, therefore, who reports his cases of venereal diseases to the Board of Health, according to his state laws, is placing himself in line with the soundest and most modern social progress, and whoever conceals these cases from the State health authorities is antisocial and reactionary.

In the case referred to the executive committee of the medical college unanimously condemned the utterance and stand taken by the elderly professor, and, in spite of his high standing and his past excellent work, the State University has made it plain that it will tolerate no such expression of opinion from one of its staff. The dean of the school of medicine in a letter to the Public Health Service, said that for eight years their school and university had stood for the control of venereal diseases in the same way that other contagious diseases are controlled. The last paragraph of this letter contained the following:

"We have already taken measures to remove all ground for criticism from the University, but I beg of you not to believe that Dr. ——— has represented the medical school in this matter, or that any student who heard him would have held that he did."

There have been a few instances where newly commissioned officers of the Medical Corps of the Army, who have not realized the sincere and energetic stand which the Army has taken, have made similar statements before medical bodies, to the effect that they would not report venereal diseases. As rapidly as these cases have come to the attention of the Surgeon General's office, these men have been uniformly disciplined with a severity merited by the extent of their offense. The whole influence of the Medical Departments of the Army and Navy, and of the Public Health Service, is being thrown in favor of the reporting of the venereal

diseases. This is a part of the plan which the United States Government has officially adopted for controlling infections.

This plan has been personally approved by the Surgeons General of the Army, the Navy, and the Public Health Service. They would never have approved it if it had been a wild theory or untried scheme. They approved it because it has been tried in certain cities and states in this country, and in other parts of the English-speaking world, and has proved itself to be the best plan yet devised for controlling these diseases. They approved it because venereal diseases are the greatest single cause for the disablement of our soldiers and sailors, and because accurate statistics for the civilian population would probably show that these diseases cause equally as serious losses among our industrial and other workers.

The Government adopted this plan when it did because this country had entered on a stupendous war with Germany, and needed the full and unbroken service of every soldier and sailor and every civilian worker, man, woman, and child. The venereal diseases, as the greatest single foe to health and efficiency, *must* be brought under control and just as rapidly as possible. To this end the Government urges every physician to report his cases of venereal disease in accordance with his State Laws, and thus add to his patriotic services to the Government at this time.

NEWS ITEMS

Dr. E. K. Pfaff, of Minneapolis, has located in Watkins.

Dr. H. H. Miller has moved from Harvey, N. D., to Minneapolis.

Dr. A. E. Holmes has moved from Verdon, S. D., to Aberdeen, S. D.

Dr. O. S. Olson, of West Duluth, reported at Fort Riley, Kas., on Nov. 25th.

Dr. E. J. Batchelder has moved from New Richland to Minneapolis, and has offices in the Donaldson building.

Dr. Herbert W. Jones, of Minneapolis, who has been visiting the hospitals of Baltimore, has returned to the city.

St. Michael's Hospital of Grand Forks, N. D., sent a hospital unit of six nurses to San Francisco, Calif., last month.

Dr. S. H. Olsen, of Milaca, received his commission as lieutenant late last month, and at once left for Fort Riley, Kas.

Dr. O. H. Urstad, who has been the only physician in Kiester for eighteen years, was called into the service last month.

Dr. Robert S. Miles, Sr., of Glencoe, died last month at the age of 77. Dr. Miles lived in Minnesota over forty years.

Dr. Edward H. Kerkhoff, of Pierz, died last month, of influenza. Dr. Kerkhoff was a graduate of Hamline, Class of '99.

Dr. C. A. Boreen, of Minneapolis, received his commission as lieutenant last month, and was ordered to Camp Custer, Mich.

Orders were received at Camp Lewis, Wash., on November 20, for the formation of Base Hospital No. 162 for work abroad.

A Preventorium for Children is to be erected at Glen Lake (near Minneapolis), \$35,000 having been presented for that purpose.

Dr. L. R. Lima, of Montevideo, a specialist in orthopedics, was called into service last month, and reported at Fort Oglethorpe, Ga.

Dr. A. E. Johnson, of Cloquet, has taken over the practice of Dr. O. S. Olson, of West Duluth, while the latter is absent in war service.

The salary of Dr. H. A. Britton, acting superintendent of the Minneapolis City Hospital, has been increased from \$3,000 to \$3,600 a year.

The influenza epidemic was so bad in the Minnesota Iron Range that physicians were sent there from Chicago by the U. S. Public Health Service.

The St. Louis County Medical Society, at its recent meeting in Duluth, passed a resolution in favor of the use of vaccine as a preventive of influenza.

A fake eye doctor, Joseph Unterbeiger, was arrested in St. Paul last month, and pleaded guilty. He took money for his treatment even from blind men.

Dr. G. S. Wattam, of Warren, was appointed temporary epidemiologist of the State Board of Health to increase his efficiency as health officer in Marshall County.

Fort Snelling sent seven nurses to New York last month for work in Europe. An order for ten was received from Washington, but only seven could be sent at once.

Dr. Darie Le Mieux, Dunseith, N. D., has moved to Rolla, N. D. His removal leaves Dunseith without a physician, except Dr. Lamont of the Tuberculosis Sanatorium.

Daily telegraphic reports of cases of influenza are no longer required by the Minnesota State Board of Health. Semiweekly written reports are substituted for the telegraphic reports.

Dr. Joseph Schwartz, of Sioux Falls, S. D., has resigned as physician of the South Dakota State Penitentiary after several years' service. Dr. W. E. Winsett, of Dallas, S. D., succeeds him.

Lieut. Oscar E. Klingen, of Minneapolis, attached to Base Hospital No. 26, now in France, died on October 16. Lieutenant Klingen was a graduate of the Medical School of the University of Minnesota, Class of '16.

Miss Margaret Connelly died on November 5, in Canada, of influenza. She was a graduate of St. Mary's Hospital of Minneapolis, and was in the employ of the Canadian Government. Her home was in Missoula, Montana.

The War Industries Board desires to express its high appreciation of and cordial thanks for the generous response made by physicians and dentists to the Board's appeal to them for platinum for war uses. There is no longer need for platinum, and the Government requests that none be tendered it.

Dr. Alfred M. Wang, of Minneapolis, died last month at the age of 57. Dr. Wang was a graduate of Northwestern, and was a scholarly man, having studied in Brussels, Rome, Berlin, and other European cities, and had taken post-graduate medical work in Vienna and Berlin.

Capt. Harry Dunlop, formerly of Duluth, died on November 2, of wounds received in France. Dr. Dunlop was associated with Dr. David Graham, of West Duluth, in 1912. In that year he went to Peru, South America. At the outbreak of the war he joined the Canadian Expeditionary Forces.

Dean Lyon, of the Medical School of the University of Minnesota, has asked the Anti-Tuberculosis Committee of the Associated Charities of Minneapolis to establish a fellowship in the Medical School, the holder of which, from time to time, shall specialize in research work in tuberculosis.

At ten o'clock on the morning of November 11, the War Department discontinued the commissioning of physicians in the Medical Corps. This condition, in all probability, is permanent and no further consideration will be given applicants for a commission in the Medical Corps until further notice.

Carrington, N. D., sent four out of its five physicians to the front; the fifth would have gone but for his age, which debarred him. Dr. Matthaei, who took over the work of Dr. Graham, offered his services, but could not pass the physical examination. Service in Carrington was epidemic, as in some other places.

Dr. Geo. Douglas Head, of Minneapolis, President of the Minnesota State Medical Associa-

tion for the year 1919, has appointed the following as the Committee on Public Policy and Legislation, for the year 1919: Dr. J. W. Little, Minneapolis, Chairman; Dr. Thos. McDavitt, Saint Paul; Dr. W. A. Jones, Minneapolis.

Miss Julia Stinstead, R. N., died on November 5, at Fort Snelling, Minn. Miss Stinstead was a victim of Spanish influenza, which later developed into pneumonia. She was a graduate of St. Mary's Hospital of Minneapolis, and was in the service of the Red Cross. The remains were taken to Kasson, the home of her parents.

Dr. Clifford M. Morrell, of Brainerd, died last month, at the age 31, of influenza. Dr. Morrell was a famous football player while at the University of Minnesota in the academic department. He graduated from the Medical School of the University in 1914, and practiced in Verndale until July last, when he became associated with Dr. J. A. Thabes, of Brainerd.

The Twin Cities removed the ban on public assemblies last week, and the schools, theaters, etc., were opened. The same action has been taken in most of the Northwestern cities. The Minnesota State Board of Health has not yet removed the ban on assemblies made up of representatives from different localities. For this reason the "Soo" Railway Surgical Association will not meet in Minneapolis on December 7, as announced. The Board meets on December 17th, and all meetings of the above character are prohibited up to that date.

Dr. Frank E. Bissell, who practiced in Litchfield for thirty-five years and was a prominent citizen of Meeker County, died last month at the age of 73. Dr. Bissell graduated from the Cleveland (Ohio) Medical College in 1869, and came west at once. Dr. Kee Wakefield, of Hutchinson, was a classmate and a lifelong friend. Dr. Wakefield attended the funeral of Dr. Bissell. Dr. Bissell was in the state legislature in 1878, and was surgeon of the Soldiers' Home, at Minnehaha, for two years, after which service he retired. He was also a Civil War veteran, and Dr. Wakefield was his companion in service.

PHYSICIANS LICENSED AT THE OCTOBER (1918) EXAMINATION TO PRACTICE IN MINNESOTA

UPON EXAMINATION

Bacon, Donald K., U. of Mich., 1918

Bowing, Harry H., U. of Pa., 1917

Fritsche, Albert, Chicago Col. M. & S., 1918

Gleason, Archie L., Rush, 1918

Hawkins, Arthur D., U. of Minn. M. D., 1919 (M. B., 1918)

Rippert, James A., Col. P. & S., Baltimore, 1910

Sawatzky, William A., U. of Minn., M. D., 1919 (M. B., 1918)

BY RECIPROCITY

Barlow, Roy A., U. of Mich., 1914

Benedict, William L., U. of Mich., 1912

Birkland, Olav N., Northwestern, 1917

Gammons, Herbert E., Boston U., 1909

Lisor, Graham MacA., Barnes, 1911

Lyons, Horace R., Northwestern, 1916

Quigley, Timothy C., U. of Illinois, 1908

Simpson, Ellery DeW., Johns Hopkins, 1912

Ward, Archie W., U. of Nebraska, 1911

RECENT ASSIGNMENTS AND TRANSFERS OF NORTHWESTERN MEDICAL OFFICERS

ASSIGNMENTS

Minnesota—

To Camp Custer, Mich.: Lieut. C. A. Boreen, Minneapolis; Lieut. E. Haberman, Osakis; Capt. J. D. Utley, St. Paul.

To Camp Grant, Ill.: Lieut. N. M. Smith, Minneapolis; Lieut. T. B. Reeves, Rochester; Lieut. J. A. Winter, Duluth.

To Camp Devens, Mass.: Lieut. F. W. Schlutz, Minneapolis.

To Camp Dodge, Iowa: Capt. Horace Newhart, Minneapolis.

To Denver, Colo.: Capt. A. G. Kessler, Battle Lake.

To Fort Oglethorpe, Ga.: Capt. William Lerche, St. Paul; Lieut. K. A. Danielson, Litchfield; Capt. A. P. Lommen, Lanesboro; Lieuts. J. S. Reynolds and W. T. Taft, Minneapolis; Lieut. L. R. Lima, Montevideo; Lieut. C. A. McDonald, Virginia.

To Camp Pike, Ark.: Lieut. C. G. Richards, Rochester.

To Fort Riley, Kas.: Capt. W. H. Replogle, Wabasha; Lieuts. G. M. Doran and A. Sivertsen, Minneapolis; Lieut. O. S. Olson, Morgan Park; Lieut. J. R. Taylor, Rochester; Lieut. H. J. Rothschild, St. Paul.

Montana—

To Camp Dodge, Iowa: Capt. W. R. Morrison, Billings; Capt. W. P. Smith, Columbus.

To Camp Lewis, Wash.: Capt. F. C. Davis, Lewiston.

To Camp Meade, Md.: Lieut. G. F. Tidyman, Valier.

To New Haven, Conn.: Lieut. A. B. Eckerdt, Great Falls.

To Fort Oglethorpe, Ga.: Capt. J. A. Lamb, Kalispell. To Fort Riley, Kas.: Lieut. C. E. Coulter, Great Falls; Lieut. E. W. Tranier, Butte; Lieut. A. A. Fuson, Hingham; Lieut. R. W. Appleman, Lavinia; Lieut. C. D. Powell, Valier; Lieut. L. R. MacBurney, Great Falls.

North Dakota—

To Fort Oglethorpe, Ga.: Lieut. O. B. Nugent, Harvey.

To Fort Riley, Kas.: Lieut. R. W. Stough, Beach; Lieut. J. W. Towey, Langdon; Lieut. M. G. Flath, Stan-

ley; Capt. L. B. Dochterman, Milliston; Lieut. G. H. Coffin, Drake.

South Dakota—

To Camp Dodge, Iowa: Capt. R. J. Jackson, Rapid City.

To Fort Oglethorpe, Ga.: Capt. F. M. Mahin, Lake Preston.

To Fort Riley, Kas.: Lieut. W. E. Dickinson, Canastota; Lieut. J. R. Westaby, Clark; Lieut. C. H. Swett, Winner.

TRANSFERS

MINNESOTA OFFICERS

Capt. C. F. McNevin, St. Paul, from Fort Oglethorpe, Ga., to Camp Jackson, S. C.

Capt. J. A. Gates, Kenyon, from Camp Travis, Texas, to Camp Meade, Md.

Capt. J. F. Freeman, Glenville, from Camp Grant, Ill., to Fort Totten, N. Y.

Lieut. F. L. Powers, Pipestone, from Garden City, N. Y., to San Antonio, Texas.

Lieut. M. Levy, Granite Falls, from Camp Travis, Texas, to San Antonio, Texas.

Capt. W. W. Lewis, St. Paul, from Camp Dodge, Iowa, to West Baden, Ind.

Lieut. L. G. Guyer, Waseca, from New Haven, Conn., to Camp Jackson, S. C.

MONTANA OFFICERS

Lieut. W. A. Hulbush, Geraldine, from Fort Sill, Ark., to Camp Beauregard, La.

Capt. E. W. Thuerer, Billings, from Camp Grant, Ill., to Camp Crane, Pa.

Lieut. M. T. Vornholt, Antelope, from Camp Dodge, Iowa, to Rolling Prairie, Ind.

NORTH DAKOTA OFFICERS

Lieut. J. B. Tyrell, Underwood, from New York, to Camp Devens, Mass.

Lieut. A. J. Kaess, Fargo, from Camp Grant, Ill., to West Baden, Ind.

Lieut. F. I. Putnam, Sioux Falls, from Camp Selby, Miss., to Minneola, N. Y.

Capt. W. F. Bushnell, Elk Point, from Camp Morrison, to Newport News, Va.

LOCUM TENENS WANTED

A firm with a large practice in a fine Minnesota town wants an assistant to whom a good salary will be paid. To the right man, one who can do some surgery, the work will probably be permanent. Address 159, care of this office.

PRACTICE FOR SALE

Large country practice for sale at price of office equipment. Good town to live in; rich surrounding country; can transfer large part of practice to competent man. Address Mrs. Howard Kerns, Granite Falls, Minn.

TECHNICIAN WANTS POSITION

Middle-aged woman desires a position as technician in a hospital laboratory or physician's private laboratory. Can also develop plates and have some knowledge of x-ray. Have had six years' experience in physician's office. Can furnish references. Address 154, care of this office.

ASSISTANT WANTED

A single man, one who is willing to work, to assist me in my general practice. Will pay a very liberal salary. Send references and write, wire, or telephone Dr. W. C. Fawcett, Starkweather, North Dakota.

\$6,000 PRACTICE FOR SALE

A \$6,000 practice in modern Minnesota village of 600; no opposition; large prosperous farming community; German Protestant element predominating; steam-heated suite of office rooms. No real estate for sale. Address 165, care of this office.

LOCUM TENENS WANTED

A man to take charge of my practice for two months beginning January 1, 1919. General practice, obstetrics and surgery. Am unopposed in a good community. He can have all he makes. Address No. 164, care of this office.

INSTRUMENTS, ETC., FOR SALE

The instruments and supplies of a recently deceased physician are offered for sale. They include a Leitz microscope with oil immersion. Call at The Concord, 11th St. and Mary Place, Minneapolis.

PRACTICE FOR SALE

In a South Dakota town of fine prosperous country, county seat, 800; 95 per cent collections; no competition. Office fixtures, etc., for sale. Going east to study. Write at once for particulars. Address No. 163, care of this office.

OFFICE EQUIPMENT FOR SALE

Here is an excellent opportunity for a physician to buy an exceptionally fine office equipment, including a new X-ray outfit, etc., and to step into a fine practice. Office is located in the heart of a Minnesota town of 16,000 inhabitants with only seven physicians. Large country territory. Must be taken at once. Reason for selling, decease of owner. Address 158, care of this office.

PHYSICIAN WANTED

Physician for the Out-Patient Department of the City and County Hospital of St. Paul; attractive salary with maintenance and use of car. This is an unusual opportunity for a man wishing to build up a city practice. Answer with full particulars,—age, married or single, experience, references, etc. Address Arthur B. Ancker, Superintendent, City and County Hospital, St. Paul, Minn.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-second annual session, opened Sept. 23, 1918, and closes June 7, 1919. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters. For further information address Charles Chassignac, M. D., Dean, postoffice drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry, hygiene and tropical medicine.

In the Treatment of

RHEUMATIC and NEURALGIC ILLS

you will obtain substantial aid from the thorough use of

K-Y ANALGESIC

This non-greasy, water-soluble local anodyne will enable you to ease your patient's pain and discomfort, while your internal or systemic medication is combating the cause of his condition.

The advantages, moreover, of relieving the pain of a facial neuralgia, an inflamed joint, or aching lumbar muscles without recourse to coal tar derivatives cannot fail to appeal to medical men.

K-Y ANALGESIC is a safe and effective adjunct that will daily grow more useful to the practitioner as the many opportunities for its effective use are realized.

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT

15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

So many cases of

Pruritus, Chafings, and Irritations

are relieved by applying

K-Y Lubricating Jelly

that we feel we owe it to our patrons to direct their attention to the usefulness of this product as a local application, *as well as* for surgical lubrication.

No claim is made that K-Y Lubricating Jelly will act with equal efficiency in every case; but you will secure such excellent results in the majority of instances that we believe you will continue its use as a matter of course.

NO GREASE TO SOIL THE CLOTHING!

Collapsible tubes, 25c. Samples on request.

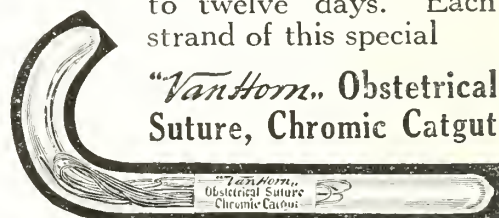
Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT

15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

IN THAT CONFINEMENT TEAR

If you favor immediate repair, use our especially chromicized catgut prepared to hold seven to twelve days. Each strand of this special



*"Van Horn," Obstetrical
Suture, Chromic Catgut*

is threaded on a suitable needle, ready for instant use. Indispensable for your surgical bag. One tube in each box. Price, 25 cents each; \$3.00 per dozen tubes. No samples.

OBTAINABLE FROM YOUR DEALER

Johnson & Johnson

VAN HORN & SAWTELL DEPARTMENT

15 & 17 E. 40TH STREET, NEW YORK, U.S.A.

DEATHS REPORTED TO THE STATE BOARD OF HEALTH OF
MINNESOTA FOR THE MONTH OF AUGUST 1918

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

[illegible]

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	0															
Aitkin	1,719	1,633	4															
Akeley			2															
Appleton	1,184	1,221	2	1								1				1		
Belle Plaine	1,121	1,204	0															
Biwabik		1,690	3															
Bovey		1,377	1															
Browns Valley	721	1,053	0															
Buffalo	1,040	1,227	2															
Caledonia	1,175	1,372	1															
Cass Lake	546	2,011	1															
Chisholm		7,684	7	1	1											2		1
Coleraine		1,613	1															
Delano	967	1,031	2															
Farmington	733	1,024	0															
Fosston	864	1,055	3												1			
Frazee	1,000	1,645	1															
Grand Rapids	1,428	2,239	1															
Hibbing	2,481	8,832	8	2	1													2
Jackson	1,756	1,907	0															
Janesville	1,254	1,173	0															
Kenyon	1,202	1,237	2															
Lake Crystal	1,215	1,038	1															
Litchfield	2,280	2,333	1															
Long Prairie	1,385	1,250	3	1														
Madelia	1,272	1,273	1															
Milaca	1,204	1,102	0															
Mountain Lake	959	1,081	0															
Nashwauk		2,080	0															
North Mankato	939	1,279	0															
North St. Paul	1,110	1,404	0															
Osakis	917	1,013	3															
Park Rapids	1,313	1,850	3															
Pelican Rapids	1,033	1,019	2															
Perham	1,182	1,376	2															
Pine City	993	1,258	1															
Plainview	1,038	1,175	0															
Preston	1,278	1,193	4															
Princeton	1,319	1,555	5															
St. Louis Park	1,325	1,743	1															
Sandstone	1,189	1,818	2															
Sauk Rapids	1,391	1,745	2															
South Stillwater	1,422	1,343	1															
Springfield	1,511	1,482	2															
Spring Valley	1,770	1,817	3															
Wadena	1,520	1,820	8	3														
Wells	2,017	1,755	4															
West Minneapolis	2,250	3,022	1															
Wheaton	1,132	1,300	2															
White Bear Lake	1,288	1,505	2															
Windom	1,944	1,749	2															
Winnebago City	1,816	2,555	1															
Zumbrota	1,119	1,138	0															

STATE INSTITUTIONS

Anoka, Asylum	0																	
Faribault, School for Blind	0																	
Faribault, School for Deaf	0																	
Faribault, School for Feeble Minded	5	2																
Fergus Falls, Hospital for Insane	12	3												1				
Hastings, Asylum	2	1																
Minneapolis, Soldiers' Home	9																	
Owatonna, School for Dependents	0																	
Red Wing, State Training School	0																	
Rochester, Hospital for Insane	15	1												1				
Sauk Centre, Home School for Girls	0																	
St. Peter, Hospital for Insane	11	2																
St. Cloud, State Reformatory	0																	
Stillwater, State Prison	0																	

OTHER PARTS OF STATE

	609	54	7	18	6	1	1	....	10	5	1	1	38	58	5	85
Total for state	1548	117	28	30	15	3	1	....	29	5	2	9	83	172	7	160

*No report received. REGISTRAR not doing his duty
117 stillbirths not included in above totals.

Typically American

American medical industries deserve your support. We are blazing the trail which is wresting his much vaunted supremacy from the Hun. Use these 100% American products. They give best results.

Chlorazene

Dakin's antiseptic, the best for all general purposes. Safe, stable, non-irritating, soluble in water, and of great potency. Try it.

Digipoten

A physiologically standardized, carefully authenticated Digitalis preparation which leaves you no excuse for using the German. Dependable, and at the right price.

Liquor Hypophysis

(Pituitary Solution—ABBOTT) Sterile, yet without added preservatives, dependable because it is physiologically standardized, made from freshest glands under ideal conditions; these are a few reasons why so many users report "decidedly positive results."

Parresined Lace-Mesh

The remarkable new American evolution in surgical dressings. It is an open mesh lace impregnated with Parresine, and is non-adherent, non-occlusive and economical.

THE ABBOTT LABORATORIES

HOME OFFICE AND LABORATORIES

CHICAGO, DEPT. 37

New York

Seattle

San Francisco

Los Angeles

Toronto

Bombay

The Management of an Infant's Diet

In extreme emaciation, which is a characteristic symptom of conditions commonly known as

Malnutrition, Marasmus or Atrophy

it is difficult to give fat in sufficient amounts to satisfy the nutritive needs; therefore, it is necessary to meet this emergency by substituting some other energy-giving food element. Carbohydrates in the form of maltose and dextrins in the proportion that is found in

MELLIN'S FOOD

are especially adapted to the requirements, for such carbohydrates are readily assimilated and at once furnish heat and energy so greatly needed by these poorly nourished infants.

The method of preparing the diet and suggestions for meeting individual conditions sent to physicians upon request.

MELLIN'S FOOD COMPANY,

BOSTON, MASS.



All Food Cells Exploded

In Puffed Grains—made by Prof. Anderson's process—some 125 million steam explosions occur in every kernel. And each one blasts a food cell so it easily digests.

The grains are sealed in guns, then revolved for an hour in a fearful heat. The trifle of moisture inside each food cell is thus changed to steam.

Then the guns are shot and the steam explodes. The grains are puffed to eight times normal size. Every food cell is broken, while cooking, baking or toasting rarely breaks half of them.

Puffed Wheat and Puffed Rice are whole grains thus fitted to digest. Corn Puffs is pellets of corn hearts puffed to rain-drop size.

All are grain bubbles, thin, crisp and flavory—nut-like food confections. All are fitted for digestion as grain never was before.

In many conditions you will find Puffed Grains an ideal form of food.

The Quaker Oats Company

Sole Makers

Puffed Rice

Puffed Wheat

Corn Puffs

All Steam-Exploded Grains

PUBLISHER'S DEPARTMENT

THE CHILDREN'S MEDICINE

The Angier Chemical Co. calls special attention to Angier's Emulsion for children in the treatment of the diseases incident to childhood, and especially in the convalescent stage, when the after-effects on the respiratory organs are imminent.

This emulsion is readily taken by children, and never upsets the stomach, and has no autotoxic effects.

X-RAY ACCESSORIES

When one has purchased an X-ray apparatus he is in possession of an instrument of great service in the practice of medicine and surgery, but he has just begun. He needs not a few accessories, some of which are more useful than others, and some of them are indispensable.

How shall he decide upon what he needs, what are most nearly indispensable, what can be gotten out of each; and, most important, how to use such accessories, as well as how to use his apparatus? The only answer is: Consult a man who knows, who wants to assist all such men, who is thoroughly dependable, and who never tries to sell a physician what he does not need and cannot use advantageously.

Such a man is Mr. Hein, of Messrs. Noyes Bros. & Cutler, of St. Paul and Minneapolis. Mr. Hein and his special assistants in this line of work will make themselves indispensable to any physician or surgeon who is beginning to do X-ray work and to desire to master X-ray apparatus.

A RENAISSANCE IN IPECAC THERAPY

Physicians generally recognize the value of ipecac in many winter ailments. Ipecac is a drug that has long been favorably known and highly regarded, but due to its nauseating properties its field of usefulness has been restricted.

With the advent of Alcresta Tablets of Ipecac, made by Eli Lilly & Company, of Indianapolis, what may be said to be a renaissance in ipecac therapy, has taken place. By means of these uncoated, rapidly disintegrating tablets it is possible to administer, orally, large doses of ipecac without nausea. Each tablet represents the alkaloids from ten grains of the drug and the nature of the compound with hydrated aluminum silicate is such that the alkaloids are not liberated in the acid secretions of the stomach, but are promptly released on coming in contact with the alkaline intestinal secretions. Those physicians who, on account of its nauseating properties, have not been prescribing liberal doses of ipecac in such ailments as acute tonsillitis, acute bronchitis, bronchial asthma, intestinal stasis and other intestinal infections now find the means at hand in Alcresta Tablets of Ipecac.

ALKALOL FEEDS THE CELLS

It is not surprising at all that so many physicians have learned to use Alkalol and to depend upon it. The surprising thing is, that every physician has not become acquainted with it, which would mean that every physician would find frequent occasion to use it, because Alkalol differs absolutely and entirely from any other product of its class that is offered for physicians' use.

It is not in the ordinary sense a mouth wash or an antiseptic solution. It is, on the other hand, a combination of physiological elements that are needed by the mucous membrane cells. These elements are held in a solution which is hypotonic, which means that Alkalol when applied to a mucous membrane produces an osmotic flow toward the cell, which results in the passage of such physiological elements contained in Alkalol into the cells. In other words, Alkalol feeds the cells instead of depleting them.

Alkaline solutions that are hypertonic simply cleanse and in many instances overstimulate the cells and provoke hypersecretion. They deplete mucous membranes, but they do not help the cells to help themselves.

Any physician who will employ Alkalol in cystitis, or in inflammation of the urethra, of the vagina or even of the uterine mucous membrane, in the throat or nose, in the eye or ear, and upon the skin in lesions, irritation or inflammation of that tissue, will speedily convince himself that in Alkalol he has an agent which is well worth bearing in mind for the many uses to which it can be most efficiently applied.

LISTERINE

Listerine is found in so large a percentage of the offices and the prescriptions of high-grade physicians, if its merit or lack of merit is to be so tested, that only one conclusion can be deducted from such a test, and it is this: Listerine is either an excellent preparation or our best medical men can be "fooled all the time." Absolutely no other conclusion can be drawn from such usage by such men.

Listerine is a mild antiseptic, and finds its greatest usefulness in the treatment of the respiratory diseases. For use in the throat and nasal cavities it is unexcelled, and it is largely used as a vehicle for the administration of alterative, resolvent, or astringent medications.

The manufacturers (Lambert Pharmacal Company, St. Louis, Mo.) will send a pamphlet on Listerine to any physician asking for the same.

THE RIVER PINES SANATORIUM

Most of our great and successful sanatoriums, especially those for the treatment of tuberculosis, are so located as to furnish their patients pleasant walking places, that is, with ample grounds around their buildings. Many of these institutions go to the country to obtain this end.

This custom has led even many medical men to look upon the sanatorium as a good place to put their patients in the summer, and not in the winter, especially in this climate.

The modern theory of the treatment of disease is to build up the resisting power of the patient, not only after, but before, he is attacked by disease. If this be true, the tuberculous case needs good winter care far more than good summer care, and that he needs it in the climate in which he lives goes without saying.

The River Pines Sanatorium, located at Stevens Point, Wis., operates upon this theory of disease, and it seeks to restore and to strengthen the resisting power of its patients, so that, when discharged, they will not lose one whit of this restored power, and will not relapse into an abnormal condition.

The River Pines Sanatorium is doing excellent work, and has made an enviable reputation.

Pasteur Treatment for Rabies

as made and improved by Dr. D. L. HARRIS, St. Louis, Mo.

U. S. Government License 66

CHIEF POINTS OF HARRIS METHOD FOR RABIES

The treatment of rabies by the Harris method is as simple as the giving of any vaccine.

Any doctor who can use a hypodermic syringe can give the Pasteur Treatment for Rabies as modified and made by Dr. D. L. Harris.

The treatment is so stable that it can be shipped anywhere and kept any reasonable length of time without loss of immunizing value.

Immunity is established earlier and lasts longer with the Harris Method than by the old Pasteur method. By this method a virus of constant and known potency is used and dosage can be accurately determined.

Full Course Treatment . . . \$25.00

Telegraph orders given prompt attention

NATIONAL PATHOLOGICAL LABORATORY Sole Distributors

CHICAGO
5 S. Wabash Ave.

NEW YORK
18 E. 41st Street

ST. LOUIS
University Club Bldg.

An Aid in Convalescence

"Horlick's" is clean, safe and dependable. Its quality assures service and results. Fats, proteids, carbohydrates and salts are properly proportioned and in easily assimilated form to progressively build up the patient.

To avoid imitations

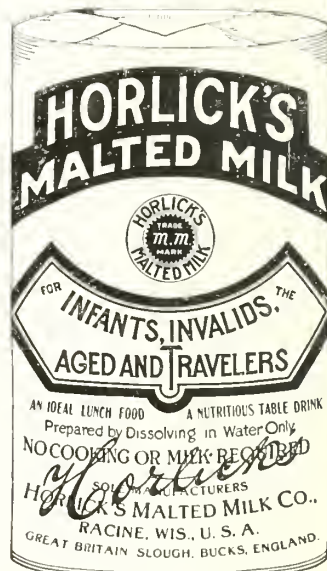
SPECIFY

"Horlick's the Original"

Samples Sent Upon Request

Horlick's Malted Milk Co.
Racine, Wis.

*This is the package
Avoid imitations*



INFLUENZA VACCINE

Prophylactic Immunization with Sherman's No. 38.

This has been practically demonstrated, in many of the large industrial plants in the Philadelphia vicinity, which territory was sooner affected by the epidemic influenza. Notably among the largest plants was the Philadelphia Electric Company, the American International Shipbuilding Corporation (Hog Island), The American Bronz Corporation, and many others from which we have not as yet received detailed reports.

Dr. Bowes, Physician in Charge of the Philadelphia Electric Company, undertook the immunization of over 4,000 men. On October 17th, three weeks after the second injection, he has a record of only three men having contracted influenza. These cases were slight, none of them having developed pneumonia, and all returned to work within three days. Sherman's No. 38 was used.

These favorable results prompted other large industrial plants and public institutions including the Boards of Health to employ immediate prophylaxis toward preventing the spread of this influenza epidemic. Notable among these institutions are the U. S. Steel Corporation, under the medical supervision of Dr. William O'Neill Sherman, American Steel and Wire Company of Ohio, Bell Telephone Company of Pittsburgh, Pa., and others.

The experience gained from the present epidemic indicates that the dosage for prophylactic immunization should be 0.3 mil. for the first injection; 0.5 mil. for the second, two days after the first, and 0.8 for the third, four days after the second injection. For more complete immunization this should be followed by 1 mil. injection one week later.

CAMPHO-PHENIQUE

Campho-Phenique is a preparation put up in liquid and powder forms, recommended for first-aid and emergency surgical dressings. Its manufacturers assert that its use in a single case will demonstrate its efficiency. It is difficult to see how a remedy that can be so readily and effectually tested by everyone who uses it can fail to demonstrate its inefficiency if it is not efficient.

This may not be said of some medical remedies, but it is manifestly true of a surgical remedy.

Surely, it is worth while to give Campho-Phenique a test. The company will furnish the sample for this purpose to any physician.

THE WAUKESHA SANITARIUM

THE JOURNAL-LANCET is proud of the uniformly high character of the sanitariums and like institutions that have long used its advertising columns for their announcements to the medical men of the Northwest. It believes that this use has been profitable to these institutions because of the confidence of our readers in our desire to make their announcements dependable by admitting only those of dependable institutions.

The above remarks might be preliminary to the mention of any and all of our advertisers treating nervous diseases exclusively; but it happens to be suggested by the Waukesha Springs Sanitarium because we started out to call attention at this moment to the work Dr. Byron M. Caples has done for many years at the Waukesha Sanitarium. In a word, this work is of the highest professional character.

A SAFE AND EXCELLENT INVESTMENT

The Northern States Power Company of Minneapolis offers for sale its 7 per cent preferred stock, which is looked upon by Minneapolis capitalists and business men as the safest and best stock offered at such a rate of interest in many years in Minneapolis.

It is a public utilities corporation, and its preferred stock is backed by property of great present, and of still greater future, value. Business men who have investigated the affairs of the company with exhaustive thoroughness have bought its stock freely, and do not hesitate to recommend it. The company's announcement appears on another page, and is well worth reading.

Build up a reserve fund in a Savings Account at the

First and Security National Bank

*Capital and Surplus Ten Million Dollars
Marquette Avenue at Fifth Street*

We Invite You to Do Your Banking here

Squibb's Mineral Oil

known as
Liquid Petrolatum
Squibb
Heavy (Californian)

Specially refined under our control, and exclusively for us, only by the *Standard Oil Company of California* which has no connection with any other Standard Oil Co.

FOR the Insane, Imbeciles, Patients in Coma, Hysterical Patients and all other cases of Irresponsibility, of Unconsciousness and of Altered Personality, Liquid Petrolatum Squibb is an efficacious and safe regulator of the bowels.

E. R. SQUIBB & SONS, NEW YORK
MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858



Rest and Convalescent Home

3349 Second Ave So., Minneapolis
N. W. Phone Colfax 2507

Conducted on Strictly Ethical Lines.
¶ Equipped to care for a Limited Number of Patients. ¶ Chronic Nervous and Mild Mental Cases Solicited. ¶ Location is Ideal—three short blocks from carlines. ¶ Strict Attention given to Dietetics.

INA E. VARCO, Supt. and Dietitian

EYE SIGHT TESTS

ALL cases referred to me will be refracted carefully and the courtesy treated in a purely ethical manner.

K. J. KNAPP

REGISTERED OPTOMETRIST

KINDY-KNAPP, Inc.

719 Nicollet Ave.

Minneapolis.

N. W. 7038—T. S. 33929

Be Sure You Get
The Minneapolis Milk
Co's Bottling



IT MEANS PURE MILK

Milk is the cheapest and best food on the market today, and every family can save money by using two or three times the usual amount consumed by the family. ¶ A perfectly pasteurized milk is perfectly free from all harmless germs; and no other milk should be used by either children or adults. ¶ Our milk is scientifically pasteurized at an absolutely uniform temperature as applied from day to day. Every process it goes through is an automatic process, eliminating every chance of contamination. ¶ Physicians can recommend it with certainty that it meets all their demands for purity and for uniformity in the elements that make milk an ideal food, both for the well and the sick.

METROPOLITAN MILK COMPANY

T. S. 33377

900 SOUTH SIXTH STREET

N. W. Main 2348

100% American

THE BAYER COMPANY, Inc. is controlled by the Alien Property Custodian and the manufacture and sale of its products are entirely under the supervision of **American Officers and Directors** appointed by him.

As soon as its books have been audited and the property appraised, the capital stock of the Company will be sold by the Alien Property Custodian to **American Citizens**.

All profits as well as all the money realized from the sale of the Company will be used for the purchase of Liberty Bonds to help in the prosecution of the War until the **complete defeat of Germany**.

Therefore, genuine Bayer-Tablets and Capsules of Aspirin as well as other Bayer products can be purchased with full confidence.

THE BAYER COMPANY, Inc.

117 HUDSON STREET

NEW YORK, N. Y.

THE JOURNAL-~~L~~ANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana

The Official Journal of the
North Dakota and South Dakota State Medical Associations

PUBLISHED TWICE A MONTH

VOL. XXXVIII

MINNEAPOLIS, DECEMBER 15, 1918

No. 24

DIAGNOSIS OF URINARY CALCULUS*

By H. G. WOUTAT, M. D.

GRAND FORKS, NORTH DAKOTA

Urine calculi are found in every part of the urinary tract; the kidneys, the pelvis of the kidney, the ureters, the bladder, the prostate, the seminal vesicles, and the urethra.

The composition of urinary stones is variable, depending upon the salts which predominate at the time the calculus is being formed. The principal substances of which urinary calculi are formed are uric acid, calcium oxalate, and phosphatic salts. Cystine calculi are rare. Uric-acid stones are round or oval and of a reddish or yellowish color. Calcium-oxalate stones are usually irregular in outline, of mulberry shape on the surface, and very hard; the color is a greyish-black. Phosphatic calculi are softer in consistency than stones formed from other salts, and are flat and rounded. When they are purely phosphatic they are whitish in appearance. Vesical calculi may be either primary or secondary. They are primary when the nucleus is formed in the bladder, secondary when the nucleus is a calculus which has passed down the ureter from the kidneys, so that a vesical calculus may have a nucleus formed in the kidney, and the rest of the stone, which is formed in the bladder, will be of a different composition from that of the nucleus. The nucleus of stone is usually formed of the products of inflammation, such as mucus, blood, pus, and bacteria. In the bladder a foreign body often forms the nucleus of a calculus. A few calculi, especially vesical, are made up of layers of different salts, the salt composing each layer depending

upon which salt is in excess at the time that this particular layer is forming.

The formation of stone is favored by obstruction, with the resulting decomposition of urine. Chronic cystitis favors the formation of stone, as does also the chemical condition of the urine, such as excess of uric-acid, phosphates or oxalate of lime.

The two predominant symptoms in most cases of calculus are pain, in varying degree, and a disturbance of the function of micturition, frequently with discomfort.

Vesical calculus produces cystitis and the symptoms associated therewith, such as pain, especially at the end of urination, frequency, and hematuria. The symptom of sudden stoppage of the flow of urine is quite characteristic of vesical calculus. The urine usually contains red-blood cells, pus, and bladder epithelium, also an excess of mucus. It is not necessarily alkaline.

The principal conditions which vesical calculus must be differentiated from are prostatic hypertrophy, cystitis, and tumor. As the same condition of the urine and the same symptoms, or nearly the same, may be found in all these conditions, it is quite clear that a positive diagnosis cannot be made by symptoms alone, but can be made by the cystoscope and x-ray. A combination of these two methods of diagnosis will, no doubt, give the best results, for some soft stones may be missed by the x-ray which could be discovered by means of the cystoscope. Some authorities estimate that as high as 50 per cent of vesical calculi are missed by the x-ray. This

*Read at the 31st annual meeting of the North Dakota State Medical Association, at Fargo, June 19 and 20, 1918.

seems rather high, but, at any rate, it shows the importance of the combined use of the *x*-ray and the cystoscope. Palpation with a bladder-searcher has long been a favorite method for diagnosing vesical calculi, but this frequently fails because the stone may be encysted, coated with mucus, or, if small, partially concealed in a trabeculated bladder or, in case of enlargement of the prostate, the stone may lie behind the prostate, where it cannot be reached by a sound. In fact, in some cases it is difficult to see the stone with the cystoscope when it is so situated.

In most cases of ureteral calculi, pain is present in one or more of the following places: the end of the penis, the testicles or labia, the inner surface of the thigh, and the costovertebral angle. Pain is often found over McBurney's point, and these cases may be mistaken for appendicitis. If the pain is high up it may simulate biliary colic. The urinary symptoms are not very definite unless the stone is moving down the ureter, in which case both the pain and the urinary symptoms are characteristic, the pain being very severe, accompanied by frequency of urination and more or less blood in the urine.

The three points at which ureteral calculi are most likely to become lodged are at the outlet of the pelvis of the kidney, at the brim of the bony pelvis, and at the part of the ureter which passes through the bladder wall. The cystoscope is of great importance in diagnosing ureteral calculi, as the appearance of the ureteral meatus is characteristic, especially if the stone is low down. If used with the *x*-ray, and the radiographic catheter the cystoscope affords the best method of diagnosing ureteral stones.

Ureteral calculus should not be diagnosed by the *x*-ray alone, as shadows are frequently seen which would be diagnosed as calculus if they were not shown by the radiographic catheter to be outside the ureter. Even by this method as high as 20 per cent of stones are missed. The waxed-tip catheter sometimes gives evidence of the presence of ureteral stone, when the *x*-ray fails, as scratch-marks on a waxed-tip catheter, which has been carefully passed to avoid scratching before it enters the ureter, are positive evidence of the presence of stone.

Renal calculi may lie dormant for some time and cause pain only in the lumbar region, or indefinite pains in the abdomen following some unusual exercise or muscular exertion, such as jumping from a vehicle or taking a long ride in a buggy or an automobile. On the other hand,

renal calculi sometimes produce typical renal colic, which need not be described.

The presence of stone in the kidney may be suspected during examination of the urine by finding more or less red-blood cells, but these are not always present. Renal calculus must be differentiated from hydronephrosis, early tuberculosis, and tumor. Here again we find that the symptoms that may be produced by these different conditions very closely resemble each other, and the *x*-ray readily discloses the presence of a stone. It is true that in a few cases soft stones in the kidney are missed by the *x*-ray. The number of such cases has been estimated at about six per cent.

In going over the symptomatology of calculus of the urinary tract one is impressed by the fact that the symptoms merely direct one's attention to the possibility of the presence of a stone, and diagnosis from symptoms alone cannot be made with certainty. It is, therefore, quite evident that the *x*-ray, the cystoscope, and the radiographic catheter afford the only positive means of diagnosis. While it is true that vesical calculi are often diagnosed by other methods, yet I think we shall find that the cystoscope and *x*-ray will reveal the presence of a stone in the bladder with greater ease and positiveness than other methods of diagnosis.

When looking for urinary calculi one should remember that when one stone is found there is always a possibility of there being others, therefore, the entire urinary tract should be gone over before the search is discontinued. In any case where there is pain, disturbance of urinary function, and blood or pus in the urine, and these symptoms do not respond readily to treatment, the patient should be given the advantage of an *x*-ray and cystoscopic examination.

I wish to cite a few cases which illustrate the importance of the use of positive methods of diagnosis in revealing the presence of urinary calculi. In the cases I present, the patients had all suffered from some form of urinary calculus for a long time, and all had received treatment, but none except one had ever been cystoscoped or *x*-rayed. If this had been done the diagnosis would, no doubt, have been made much earlier.

CASES

CASE 1.—Mrs. E. D., aged 41; married, and had three children. She had always been well until eight years ago, when she had an irritable bladder, the trouble increasing up to four years ago, when she had several polypi removed from the urethra. She was relieved until about one year ago, when she began having pain

on urination, frequency, and sometimes blood. She has had various kinds of treatment.

Urine examination: Sp. gr., 1015; acid; slight albumin; some red cells and leucocytes.

Cystoscopic examination: There was a small stone lying free in the bladder. Bladder normal except slight inflammation at the base. Radiogram of kidney and bladder region shows shadow of stone in the bladder, although not very definitely.

Diagnosis, vesical calculus.

CASE 2.—Mrs. A. R., aged 44; married. Has one child, ten years of age. Complains of being very nervous. Has frequent urination, and has urinated two or three times a night for many years. For the last two years it has been very painful. Has an indefinite pain on the left side of the abdomen. Six years ago had an operation, the left ovary and tube being removed. Lost twenty-five pounds in last two years.

Urine examination: Sp. gr., 1018; acid; slight amount of albumin; no sugar; few hyaline casts; red-blood cells and much pus.

Urine, negative for T. B.; also guinea-pig inoculated, negative.

Cystoscopic examination shows a small bladder with trabeculated walls; inflammation especially around left ureteral meatus. Purulent cloudy urine from left ureter. Culture shows bacillus coli. Capacity of pelvis of left kidney, small (1.5 c.c.). Injection causes severe pain. It was intended to x-ray the patient at this time with the catheters in place, but on account of the severity of pain produced by injecting the pelvis the catheters were removed, and radiograms taken later without the catheters.

Diagnosis, renal calculus.

This case illustrates the importance of the radiographic catheters. In looking for renal calculi, as in this case, the calculus was nearly missed; in fact, it was overlooked at the first examination, and a diagnosis of pyelitis made. Had not the small capacity of the pelvis of the kidney and the pain caused by the injecting fluids aroused suspicion anew of the presence of calculus, a diagnosis of pyelitis would have been made, and treatment carried out along this line. But the catheter was again inserted, and this time a radiogram showed the shadow of a large stone in the left kidney pelvis.

CASE 3.—G. B., male, aged 58.

Present complaint: Trouble in passing urine. Has had to be catheterized several times when he had retention; passes urine two or three times a night. Has heavy feeling in rectum especially when he walks much. Other symptoms are also aggravated at this time. Passes small amount of blood sometimes at the end of urination.

Urine examination: Sp. gr., 1024; acid; slight amount of albumin; no sugar; a few pus cells.

X-ray examination shows large shadow in bladder region. Cystoscopic examination shows greatly trabeculated bladder wall, large stone free in bladder, inflammation of bladder, and a somewhat enlarged prostate.

Diagnosis, vesical calculus.

CASE 4.—Mrs. J. A. M., aged 25. Present complaint, pain in left side. Has always been well until about a year ago, when she was taken with a severe pain in the lumbar region of the left side. Pain radiating to bladder region with frequency of urination. Pain was very severe, and lasted about an hour. Has had several similar attacks, always accompanied by frequency. Cannot ride any distance in a wagon or automobile without pain in the side. Examination shows tenderness to deep pressure in the left costovertebral angle.

Urine examination: Sp. gr., 1020; acid; albumin present; no sugar; few hyaline casts; a few red-blood cells; small number of leucocytes.

Cystoscopic examination showed the bladder normal, urine from left kidney, quite an amount of blood. Radiogram with catheter in kidney shows shadow considerable below tip of catheter.

Diagnosis, stone in the lower pole of the kidney.

At operation the stone was found to be in the pelvis of the kidney, instead of in the kidney.

CASE 5.—W. H., male, aged 50. Four years ago he began having frequent and painful urination. Was sometimes relieved when he took medicine, of which he took many kinds. At present he tries to pass urine about every half hour, sometimes oftener. Urine comes very slowly. Has more or less pain constantly. Feels better lying down. Involuntary flow of urine when asleep, but can sleep only a little while at a time. Occasionally there is blood in urine, especially if he walks much.

Urine examination: Sp. gr., 1015; alkaline, ammoniacal odor, loaded with pus; the bladder, with epithelium and mucus. No red cells. Patient refuses the cystoscope or even to have a catheter passed because he had instruments passed into the bladder many times, and it always made him worse. X-ray examination on two successive days shows a large symmetrical shadow in the bladder.

Diagnosis, vesical calculus.

Before operation, after the patient had been anesthetized, the cystoscope was passed into the bladder. The capacity of the bladder was very small. Walls were very much trabeculated, and showed a large free stone with smooth surface, which no doubt accounts for the slight amount of bleeding which he had compared with the severity of his other symptoms.

CASE 6.—A. R., male, aged 60. Always quite well until two years ago after getting wet and cold in rain storms. Began to have burning and frequent urination. Sharp pain at end of urination. Some blood at times.

Urine examination: Sp. gr., 1022, strongly acid; albumin present; no sugar; a few red and white cells; prostate somewhat enlarged; catheter passed into bladder fairly easily; no residual urine.

The patient was advised to take hot sitz baths and a urinary antiseptic. After a week he became worse; advised cystoscopy, which was done. Bladder capacity, four ounces. There was much inflammation. Had an enlarged prostate, and there was a dark mass on the left base of bladder behind the prostate, which could not be seen distinctly on account of the enlargement of the prostate and cloudy medium. Looked like dark stone. Radiogram showed small shadows in the same location.

Diagnosis, vesical calculus.

A very important point in the x-ray work of urinary organs is to have the bowels thoroughly emptied, for small fecal masses may be mistaken for calculi. If there is any doubt about the case the examination should be repeated as often as seems necessary.

DISCUSSION

DR. V. J. LAROSE (Bismarck): In cases complaining of vague abdominal pains and aches where the symptoms are not typical, the physician's attention should be drawn to the urinary tract, first, by the history; second, by the physical examination; and, third, by urinalysis.

First is the patient's history: I may say that a number of these patients will give a history of having been operated on some time before, maybe a year or several years. They may have been operated on for appendicitis or other conditions, and the same old pain still persists. Furthermore, a history may be obtained of urinary disturbances at times. There may be intervals of relief followed again by more or less urinary irritation, and there may be a history of having passed a stone or of having passed so-called sand. These sandy particles may be found in the urine, or the patient may have the sensation of passing them.

In the physical examination there is not much to be made out, except tenderness in the region of the bladder or kidney. Sometimes, where a calculus in passing down causes a temporary obstruction, there may be an enlargement of the kidney on that side.

As to the examination of the urine: If we find a great many uric-acid and calcium-oxalate crystals, especially those with rounded forms, we should be very suspicious of calculi in the urinary tract. Following an attack, the presence of blood-cells in the urine, and sometimes pus, should direct our attention there also.

As to the x-ray and stones missed. There are stones, as Dr. Woutat has said, where no shadows are cast at all. The shadow in a stone is caused by the inorganic salts that it contains, and most stones contain inorganic salts in at least some percentage. Stones are often missed if they happen to be lying over some of the bony processes,—for instance, the ridges of the sacrum or over the transverse processes. It is very easy to miss a stone shadow that way. The size of the patient must also be taken into consideration. Most important is the degree of hardness of the tube. In examining for stones the tube should not be too hard. The plate that shows a brilliant detail of bone or vertebrae and the transverse processes, while it may be a very pretty plate to look at, may not be of any value at all from the standpoint of diagnosis, for the reason that the rays are so hard that, if the stone is lacking in inorganic salts, they pass right through, and the stone will cast no shadow. I find the best way to examine for stones with the x-ray is to have the tube rather soft and of a fair penetration, with a longer exposure. You can give a long exposure if you use a compression diaphragm by instructing the patient to breathe shallow with the upper part of the chest. A long exposure with a soft tube will find stones that would be missed ordinarily.

Now, as to the use of the cystoscope: First, I may say that the old-fashioned method of passing a sound into the bladder or using a stone-searcher, hoping to be

able to feel the click if it strikes a stone, should only be mentioned to be condemned. It is a procedure that does not locate many stones, and it may cause more or less trauma and do harm. With the cystoscope we have so much better means of examining the bladder that I would not defend the use of the sound at all.

As to the stones higher up: The use of the shadow-casting ureteral catheter is very important. In passing a catheter you may meet an obstruction. This will lead you to concentrate your mind on this particular region where the catheter has stopped, and, very often, you will find there a shadow that you overlooked before. You have probably all found that, in the examination of x-ray plates, it is very easy to see things after they have been pointed out, but it is very hard to find them at first unless you have had a great deal of experience.

Then, again, the catheter passes away into the ureter and into the kidney. It is well, when the catheter is withdrawn, to examine it. In some cases of very soft stones you will find in the eye of the catheter small particles of sand, which will lead you to suspect stone. The shadow-catheter will differentiate often between a stone low down in the ureter and calcified blood-clots or phleboliths that are frequently found in the bladder region, especially in older people. The phlebolith shadows are circular in outline and located usually to the outer side of the catheter, while a calculus is usually oblong or irregular and may obstruct or lie in contact with the shadow-catheter.

There is one pitfall, though, for the examining surgeon, and that is where the stone has existed for some time and has ulcerated into a little pocket alongside the ureter. The catheter will pass up easily without obstruction, and its shadow will be shown on one side. Though not a very common condition, still it is worth while to mention it.

The doctor mentioned the wax-tipped catheter. I believe where a patient gives definite symptoms of renal colic, and the x-ray fails to show anything, the wax-tipped catheter should be used. Of course, you can get symptoms of renal colic from small blood-clots passing down the ureter, and you can get renal colic from a very small stone, maybe not larger than a grain of wheat. A stone of that kind would, in many cases, be very difficult to detect with the x-ray. For that reason there are many cases of severe renal colic where you are unable to find definite shadows. Of course, if a patient passes a stone after you have made your examination, then you know you have missed the stone. If you pass your wax-tipped catheter and find scratch-marks on the catheter, and still there is no shadow seen on the x-ray plate, you can feel sure you have missed the stone. If you can palpate the stone in the ureter, as it is possible to do in some cases in the female if the stone is very low down toward the vagina, then you can be reasonably sure there is a stone there. To be sure, that can be proved only by recovering the stone.

Other cases we just have to pass by. We know the patient has had pains, evidently of renal or ureteral origin, but the case stops there, and we have no way of proving whether there was a stone there or whether there was not. So it is pretty hard to say definitely what percentage of stones are missed, unless you can prove in each case whether or not there was a stone.

I believe that the main point in a paper of this kind, read before men who are not doing this line of work,

is to impress upon them the signs and symptoms that you may have in an ordinary examination of the patient,—the signs and symptoms that will attract your attention to the urinary tract. For instance, you may have a very severe pain in the region of the appendix, and this pain may be very marked and almost characteristic of acute appendicitis, still the patient may show no constitutional symptoms whatever. Examination of the urine may show a few blood cells and a trace of albumin or one or two pus cells. I believe that in every case of ureteral or renal colic, if you will examine the urine carefully you will be able to find some of these elements, and in this way your attention is directed to the urinary tract.

In examining the urine there is one point that I wish to make, and that is, in examining the urine, especially for pus or blood, it should be a catheterized specimen. I would not pay any attention to a specimen unless it is a catheterized one, because you very often find blood and pus cells in urine from contamination when the urinary tract is practically negative. Of course, if you examine an uncatheterized specimen and find it negative, that is all that is necessary. If, after making a careful

examination of the urine, you find some of these elements present, and if you are so situated that you can make your x-ray examination and do your cystoscope work, all right. If not, however, then that would mean that the thing for you to do is to send that patient where men properly qualified and equipped to do that work can make the necessary specialized examination.

DR. FRED EWING (Kenmare): I was glad that Dr. LaRose brought out the matter of the hard tube in taking the picture. Dr. Smith, of Chicago, who did some of the early work in detecting stone, used to say that if you have a plate in which you can see the transverse processes you have a plate that should show the stones. I notice in our own experience that we find if you can see that and you can also see either the outline of the kidney or the outline of the psoas muscle, then we have a plate you can depend on. So it is just as easy to get your plate too hard as it is to get it too soft. That is due to the fact that with the old coil machine we did not get the penetration we do now with the transformers. The danger now is as much over exposure as under exposure.

INFLUENZA AS TREATED ON A U.S. HOSPITAL SHIP

By CLIFFORD E. HENRY, M. D.

Lieutenant Commander, U. S. Hospital Ship Solace

The following interesting letter from Dr. Henry, of Minneapolis, was written to Dr. Geo. Douglas Head, and we are permitted to publish it through Dr. Head's courtesy.—THE EDITOR.

Thinking that you would be interested in some of the findings we have made in regard to the influenza epidemic I will give some of my observations. The censor regulations do not permit quoting the number of cases or deaths.

The function of a Hospital Ship is to take over all medical and surgical cases that cannot be well taken care of on board a battleship. As a result we have had few straight influenzas. As you no doubt remember, I have the medical side of my unit.

The pneumonias have been a straight bronchopneumonia, what we have termed massive bronchopneumonia and bronchopneumonia with a superimposed lobar.

In all these cases there has been a decided leukopenia and a very low blood-pressure. The onset, as a rule, is rapid, with the entire chest involved. There are crepitant, subcrepitant, and mucous râles throughout, with patches of consolidation. The majority of the cases develop the massive type in the lower lobes by the coalescence of the smaller areas of consolidation. The lobar involvement is generally announced

by a chill and a sudden jump in the white-blood count, and may be made out in one of the upper lobes. At the usual time the patient will have his crisis, and later there will be a rise of temperature, and then lysis. The sputum in the bronchopneumonia types is clear blood; in the lobar cases there is a typical rusty sputum for a time, but this may change to the blood in a few days.

We have found very few Type I pneumococci either in the sputum or the urine examinations. Most all sputums contain streptococci, and some hemolytic streptococci. We have not recovered the streptococci from the blood, but have the pneumococci.

As for complications, we have considerable arthritis and laryngitis, but very little sinus and mastoid involvement.

Abdominal signs: an aching with general tenderness and no distension, diarrhea, toxic involvement of nerves manifested by persistent hic-cough and projectile vomiting, pericarditis, and nephritis, not the simple albuminuria of fever, and meningitis. The last differs from an ordinary meningitis in that there may be very little stiffness of the neck, and no retraction of head, but a general nervous condition and headache. In other cases there are all the usual symptoms, including the purpura.

We do a spinal puncture in all cases that are at all suspicious. In some cases the meningitis symptoms are first to develop.

The pneumococcus is the organism recovered in all the spinal fluids that are positive. A general jaundice has developed in some cases. There was delirium of all stages from the low muttering to the wild.

Cases that have come to autopsy have borne out the clinical findings, and have also given some big surprises. As a rule there is involvement of both lungs throughout. The areas of massive bronchopneumonia when split open contain considerable fluid blood. The lobar pneumonia area may be in between two such areas. As a rule there is considerable pus in the lung. We have found very little fluid in pleuras, but often very dense adhesions. The liver is often enlarged,—a passive congestion. The pancreas hardened, and there are often hemorrhagic areas. The kidneys also often have hemorrhagic areas, and there have been large clots found in the

suprarenals. In the meningitis cases the pus is found under the meninges.

In regard to treatment: I have employed all the usual methods and drugs, and Type I and polyvalent serum given intravenously. There are two things that we have done which have not been done as a rule outside, at least I have not seen it mentioned. The first is the wet pack, as advocated by Dr. Simon Baruch, to control the delirium. It is wonderful how it acts. The other is the use of serum from convalescent patients, taking care to match up the bloods and giving Noguchi's test to every donor.

If you find anything of interest in the above, and think it would be of value to the members of the Medical Society, I would have no objection to your using such portions as you desire.

I think our unit has been exceedingly fortunate to secure duty on this ship, which is so rich in traditions of wonderful work as a hospital ship.

BACTERIOLOGY [OF] THE PRESENT EPIDEMIC OF INFLUENZA*

By A. C. POTTER, M. D.

Director of Laboratories, Minneapolis City Hospital; Instructor in Pathology and Bacteriology, University of Minnesota

MINNEAPOLIS

The bacteriology of influenza has been the subject of considerable controversy, not alone in this country, but especially so in Europe. It is not within the province of this paper to review the literature. I must say, however, that a great deal of this literature impresses me as being immature and inconclusive.

In this paper only the work actually done in the laboratories of the Minneapolis City Hospitals will be reported. Personally I am absolutely convinced that bacillus influenzae of Pfeiffer is the primary invading organism—streptococci and pneumococci occurring later in the course of the disease as secondary invaders, and are responsible for a high percentage of the fatal cases. To date 259 sputa have been examined, from 116 we have recovered bacillus influenzae in pure culture, 143 were negative for bacillus influenzae.

These sputa were collected during all stages

of the disease. Those collected during the first stage, were almost 100 per cent positive for bacillus influenzae, the percentage of positives depending to a large degree upon the stage of the disease. Later streptococci or pneumococci predominated with bacillus influenzae diminishing rapidly after the fourth or fifth day of the disease. In practically every case we obtained a heavy growth of micrococcus catarrhalis.

I desire to stress the following, which I think is very important. In the regular course of our work previous to this epidemic, we have had from four or five to as high as forty sputa coming to the laboratory every day. These sputa are collected from all sorts of cases. They have been carefully studied, not alone for their bacterial flora, but also for their cellular element, crystals, and so forth. When the sputa from the influenza cases came in there was at once noticed a pronounced change in the bacterial flora of these specimens. They were simply loaded with a Gram-negative bacillus, morphologically iden-

*Read in a Symposium on Influenza, before the Hennepin County Medical Society, November 4, 1918.

tical with bacillus influenzae. There could be no question but that this was the predominating organism, micrococcus catarrhalis also being present in large numbers.

It has been said that bacillus influenzae occurs in 10 per cent of all sputa. This I doubt very much, but, granted that a few colonies can be obtained in 10 per cent of sputa, I can say positively that bacillus influenzae is there as a very negligible factor, certainly they cannot be compared with or have the same significance as the immense number found in the sputa collected during this epidemic, and a few organisms can be of no more significance than the ever present Group IV pneumococcus.

It has also been reported that bacillus influenzae occurs in a large percentage of cases of pertussis and measles. It is true that bacillus Bordet Gengou is almost identical with bacillus influenzae, but not necessarily the same organism. Their identity will remain obscure until some differentiating cultural method has been found. Several observers have been inclined to accept the streptococcus and pneumococcus as the exciting organisms. These observers are among those who have been unsuccessful in isolating bacillus influenzae in any large percentage of cases. I believe their failure to isolate bacillus influenzae is due to their overlooking one great factor, namely, that bacillus influenzae is extremely susceptible to all extraneous influences. Every condition must be favorable, the sputum must be fresh, and it is important to get real sputum, not merely saliva. The ordinarily accepted method of isolating organisms (that is, by diluting the sputum with saline and then planting in agar) will not do at all in the case of bacillus influenzae. When treated that way the organism simply disappears. It very probably undergoes plasmolysis. We cultured twenty sputa following this method of dilution, and did not recover a single positive. By following our usual technic, running these same sputa, we recovered eleven positives and nine negatives. The highly resistant streptococci and pneumococci grew beautifully in the plates of the diluted specimen, and I can readily understand how one could come to the erroneous conclusion that they are the predominating organisms. This fact must also be remembered that bacillus influenzae grows much more luxuriantly in the presence of other organisms, therefore, when diluted one removes a most favorable cultural asset.

The technic which we have followed is very simple: direct smears on blood agar (lately we have used the so-called hormone agar). If possible a thick mucopurulent portion of sputum is obtained; a heavy platinum wire with the end bent at right angles, sterilized in a flame, is then pushed through the selected portion. One side of this wire is lightly dragged over the entire surface of a blood agar petri plate preparation (large size petri plates are used), incubated at exactly 37° for about twenty-four hours. Influenza colonies must now be fished, using a pointed platinum wire. These colonies vary markedly in appearance. Discrete colonies growing by themselves are almost invisible, while those growing very near other organisms may, at the end of twenty-four hours, be one or two mm. in diameter, and appear somewhat bluish in color. It is exceedingly difficult to pick these colonies, and I cannot do so, with any degree of certainty, even now after examining many plates. It requires patient perseverance; and often numerous colonies have to be stained.

Microscopically influenza bacilli appear as very minute Gram-negative coccobacilli. When transplanted we have not been able to get a growth on any media not containing hemoglobin. Laboratory animals were absolutely immune. These qualifications fulfill all of the known requirements to date.

I might say that Dr. E. C. Rosenow visited the laboratory and corroborated the work absolutely. He took about twenty specimens of sputum with him, and I have this letter from him:

Dr. A. C. Potter,

Minneapolis City Hospital,
Minneapolis, Minn.

My dear Dr. Potter:

You will be interested to know that I succeeded in isolating the influenza bacillus from every case from the City Hospital. A number of parallel cultures were made on blood agar and on "Hormone" agar. The latter showed many colonies, and the former few or none. The predominating flora outside of the influenza bacillus, in the cases from Minneapolis, as well as those from here, appears to be pneumococcal or at least green-producing streptococcal.

Sincerely yours,

E. C. ROSENOW.

I want to take this opportunity to thank Dr. Kino Ikeda most heartily for his able assistance in the laboratory during this epidemic.

ACUTE SUPPURATIVE OTITIS MEDIA*

BY LORENZO N. GROSVENOR, M. D., F. A. C. S.

HURON, SOUTH DAKOTA

The dearly beloved country doctor has had a very busy, trying day, with several long drives, and finally has a chance to get to bed. About two or three o'clock in the morning, he is suddenly aroused by the telephone bell fiercely and persistently ringing. He jumps up, and hurries to the phone. "Oh, Doctor, come quick, Willie has the earache. Been yelling with pain for an hour or more. Come quick, Doctor."

Well, the doctor jumps into his clothes, grabs his bag, pushes his automobile out — to see "Little Willie."

The only history the doctor can get is that Willie woke up about two hours ago with great pain in his right ear, and has been "yelling" with said pain ever since. Well, Doctor, what you going to do about it?

On examination, the doctor finds very little, if any, tenderness over the mastoid, but great pain deep in the ear. No discharge; snuffles from a cold in the nose; a typical adenoid face; tonsils large and oozing a whitish discharge from the crypts.

The first thing to do is to relieve the pain. The tympanic cavity is full of inflammatory exudate, which cannot drain off through the swollen, inflamed Eustachian tube. This exudate causes pressure on the terminal nerve fibers in the tympanum, thus causing the pain; therefore, it is necessary to relieve the pressure.

The doctor needs and should be equipped with proper tools, such as a head-mirror, ear-specula, dainty ear-bistoury, sharp pointed, and good light.

Inasmuch as Willie is suffering and restless, you better roll him up in a sheet, with arms extended down his sides, well pinned up.

The question arises at this time, how can the case be handled without hurting Willie? Two ways are feasible: by the use of local anesthesia in the drum, or of ethyl chloride as a general anesthetic. For the local anesthetic, use a solution made up of equal parts of cocaine, menthol, carbolic crystals. A few drops in the ear will produce anesthesia of the drum in five minutes. For the general anesthetic, use ethyl chloride sprayed on an ether mask held over the nose and mouth for a minute.

Having thus secured your anesthesia, with a good light, back and to the right of the patient's head, insert a suitable-sized speculum into the canal so that you get a good view of the drum by reflected light from the head-mirror. The drum is very red and bulging. With a dainty bistoury make long free incision in posterior half of the drum, one-fourth inch long, cutting from below upward and in a crescent shape. This will at once relieve the tension and pain. A free bloody discharge results. After a few minutes you can wipe out the canal with a dainty cotton swab, being sure to get out all blood clots. Put into the canal a few drops phenol-glycerine, a dram to an ounce, or phenol-camphor in the proportion of two to three.

Put a cotton pledget into the external ear, and go away and let Willie go to sleep.

Now, as to the after-treatment. The first thing to do is to clear out the postnasal space of adenoids, take Willie to the hospital the next day, and have his tonsils and adenoids properly removed. There must be no hesitation about this; no procrastination; now is the accepted time. It will be next to impossible to clear up the ear trouble unless the adenoids are removed.

It is now up to the doctor to cleanse the ear drum and canal, himself, thoroughly, firmly, and gently, two or three times a day. Possibly you are the doctor man who says, "Oh, I just tell them to wash out the ear once in a while." Well, doctor, is that the way *you* do it?

Have you ever noticed the housewife washing up the dinner dishes? When through, there is a greasy scum over the surface of the great, large pan of dirty water. She dumps the pan into the sink, expecting the scum to go along with the water, but does it? No! She fills the pan with water again, and dumps it. Does the scum flow out this time? No, No! The greasy scum lines the pan. She has to get the dish-rag and wipe it out. Now then, this same idea applies to the discharging ear. You can irrigate with water by the gallon, but you cannot clear off the layer of pus that covers the surface of the drum and membranes. You will have to wipe it off firmly, but gently, with small cotton swabs. I have had to learn by hard experience that the dry methods are far superior to the wet methods in treating discharging ears. The doctor should insist that

*Read at the 37th annual meeting of the South Dakota State Medical Association, at Mitchell, May 22 and 23, 1918.

the patient come to town so that he can come to the office at least twice a day, and have the doctor himself wipe out the drum and canal to the very bottom, thoroughly, carefully, and gently.

Having wiped out the canal properly, the nose and postnasal spaces should be carefully cleansed by a spray of a mild alkaline solution, followed by a medicated oily solution, sprayed postnasally, up back of the soft palate, with the head bent forward over a basin; the solution flows forward through the nose. The nose is then blown carefully by the patient.

The doctor can now safely inflate the Eustachian tube by means of a Politzer bag, or, better still, compressed air with a nebulizer of medicated oil. Forcing a stream of air out through the Eustachian tube blows pus out of the tympanic cavity through the large perforation you have made in the drum. Again the doctor wipes out whatever discharge has been blown out. A piece of one-half inch wide seldedge xeroform gauze is then placed in the ear canal, one end being placed up against the drum, the rest being lightly packed into the canal. The small pledget of cotton in external ear should be changed as often as it becomes moistened.

A large majority of acute ear cases that are secured early and give the doctor a chance to do the work in the above fashion will clear up in a week or ten days.

Another case. The morning train brings in a young lady who gives a history of acute earache four or five days ago. The family doctor was called, and advised hot applications and anodyne drops in the ear. This stops the pain somewhat as long as used. In a few hours, maybe twenty-four or more, the drum breaks by pressure necrosis, with much discharge. Still she continues to have more or less pain and tenderness over the mastoid. In a few days the family doctor begins to fear mastoid trouble, and chases the patient to the ear surgeon in a nearby city for a mastoid operation.

The ear surgeon listens to the patient's tale of woe. On examination the doctor finds much purulent discharge in the canal, and some tenderness over the mastoid. He wipes out the canal and drum. Finds a pinhole opening in the lower part of the drum, giving very little chance for free drainage through so small an opening. He also finds considerable discharge from the nose, which is possibly a chronic catarrhal condition of the nose and throat.

The first thing to do is to make a free incision

in the drum, as before described. In a few minutes the ear should be wiped out thoroughly, the nose and throat cleaned by a postnasal spray. Inflation. Wipe out the canal gently, but firmly and thoroughly. Insert a xeroform gauze drain and cotton pledget.

This patient was instructed to find a room in town, and to come to the office for treatments two or three times a day. The doctor thus had a chance to follow out the treatments as described, and in a week the inflammation of the tympanic cavity had subsided, the discharge stopped, the perforation healed, and the patient was sent home well.

We have had, up in our town, a large number of ear cases following the exanthems, measles and scarlet fever this spring. The above outlined treatment has given splendid results. Do not think that this method will cure every case, for no two cases are alike. You must individualize each case, and treat it as conditions require. Some patients, in spite of the best of care, will go on and develop a mastoid, which will require operation.

HOW NOT TO DO AN EAR CASE

A general practitioner had an eleven-year-old girl develop an acute earache after scarlet fever. He puttered along with hot fomentations, anodyne drops, internal remedies, etc. There was a slight discharge from the ear, but much pain in and around the ear. The patient was allowed to worry along in this fashion for a couple of weeks until she was pretty sick and weak, and had developed a large bunch back of and above the ear with much pain. The family doctor finally called in an ear surgeon, telling him "there was very little temperature, the pulse little rapid, patient very weak, and does not seem to get along very well."

On examination the ear surgeon finds a large subperiosteal abscess over and above the mastoid. On operation at the hospital that evening a large amount of pus discharged on opening the soft tissues. The mastoid cortex and cells were necrotic and full of pus. The child had been allowed by the general practitioner to get into a very septic condition before the ear surgeon was given a chance.

Is this conservative treatment? No, never!

DISCUSSED

DR. R. D. ALWAY (Aberdeen): I quite agree with Dr. Grosvenor in recommending early myringotomy in these cases. I think it is very important. If there is not much change in the drum membrane where you

have an earache which is severe and accompanied by some deafness, it is much better to do a myringotomy than to let the case go along until perforation occurs spontaneously.

I think there is a little difference of opinion in regard to removing tonsils and adenoids in some of these cases within two or three weeks, because it often happens that the patients are pretty sick for two or three weeks; and another thing, you are not sure about infection unless you have taken a culture, and if there is a streptococcal infection you sometimes aggravate the condition more than you relieve it by cleaning out the pharynx and the post-nasal space promptly. I know that has happened to me once or twice in times gone by, and in some of these cases I would rather wait than undertake it at once.

There is another class of cases to which the doctor did not refer, and that is cases where you do not see the patient until after he has had perforation and there is a discharge, especially where some of the cases have a pulsating discharge of pus. Those are dangerous cases. I think the first thing to do in these cases is to take a culture and find out what the micro-organism is—find out whether there is a mixed infection, or whether there is a streptococcal infection. Often in the cases that run along for a few weeks and where there is probably a little sepsis, possibly with no tenderness over the mastoid, but discharging considerable pus, it is a good thing to take an x-ray. I have taken a number of x-rays of the mastoid during the past winter, and it is a very valuable thing. It will tell you the truth almost every time. It will tell you whether there is pus in the mastoid cells and whether the pus is confined to the middle ear. I think an x-ray of the mastoid is as useful as at any point I know of. You can depend upon it even more than you can in the accessory sinus cases.

The essayist recited a number of cases, and the class of cases which come under the observation of the specialist every winter.

We do not want to condemn the general practitioner. Sometimes he sees these cases, and is not looking for the dangerous points that the specialists are. He is depending upon tenderness over the mastoid; but in some of the worst mastoid infections, and especially in children, there will be almost no tenderness, and often in adults there will be no swelling. By examining the external auditory meatus we frequently find that there is bulging of the posterior wall, but often the general practitioner in his rounds through the country has not got his head-light, and he does not carry an ear speculum, and probably he is not examining a number of cases every day, of the external auditory canal, and he does not recognize the little things that a man who is making a specialty of these cases recognizes.

Of course, I believe that all patients who have diseased adenoids and tonsils should have them ultimately removed. As I remarked at the beginning, only there might be some difference as to the best time when they should be removed.

PRESIDENT KOOPS: Dr. Alway's statement that it is well to know what the infection is, reminds me that it might have been well for me to have done that this spring. We have had an unusual run of streptococcal infections this year, apparently following, in the large majority of cases, measles, the so-called German measles principally; and among these I had two cases of mastoiditis, in which Dr. Alway operated, and in which,

immediately following the operation, at least within two days or three, there developed erysipelas,—facial erysipelas. I had not thought of it in the light which Dr. Alway brought it to my notice before, but it is altogether likely that these infections were streptococcal infections, and, while both cases terminated favorably and came out all right, yet it would have influenced our treatment and the prognosis in these cases.

DR. ALWAY: I would like to say another word. I had a case a year ago at home, where a woman was brought in—the husband was a veterinarian—it was a case of acute mastoiditis. I took a culture, and found that she had a streptococcal infection. She developed erysipelas following the operation, about thirty-six hours, and nearly died. We had a hard time to save her life. That man refused to pay his hospital bill; and refused to pay me, and said if I attempted to collect it he would sue me for malpractice because there was erysipelas in the hospital, and that that was where she got it. I sued him, and got my fee. I found that the culture medium was mighty good evidence in this case, and I went into court confident of the result.

DR. T. D. SMILEY (Mount Vernon): I did not hear all of this paper. There was one thing brought out by Dr. Alway which I wish to speak about. Dr. Alway spoke of the general practitioner as if the general practitioner needed to apologize for his failure to make a diagnosis in these cases and to institute a radical treatment. I want to take up the cudgels for the general practitioner. Dr. Grosvenor spoke a little as if the general practitioner were a sort of failure. Dr. Alway apologized for the general practitioner, and patted him on the back and told him he was not so much to blame after all.

I want to find out just one thing. The specialist in these cases generally comes in after things have arrived at such a point that almost anybody can make a diagnosis. The general practitioner, as a rule, takes the patient to the specialist and points out that there is something wrong about that ear, and he says, "I want you to examine it." If this specialist had seen this patient early, when various other things were going on, when nothing had shown itself, especially around that ear, he probably would have stumbled just as much as the general practitioner. I get tired of this thing on the part of the specialist, of roasting the general practitioner. It is up to the specialist to do his work well.

I want to relate an incident which occurred once along this line. At one time I sent a patient up to the Mayo Clinic at Rochester for examination. The patient said to me, "What do you want me to go there for?" I said, "There is a suspicion in my mind and I would like to either get rid of that suspicion or have it confirmed." She said, "What do you suspect?" I said, "I suspect a cancer somewhere in the liver." She went to Rochester, stayed there eleven days, came back, and to my amazement the statement was made that she simply had some nervous symptoms due to the menopause.

I was skeptical about it. But about ten days later she developed symptoms which showed to any physician that there was involvement of the liver by something, and the probability was that it was a carcinoma. She wanted to go back to Rochester, and she wanted me to go back with her. So I went, and took her in to Dr. Robinson who had charge of her. I said, "What do you think of her now, Dr. Robinson." He said, "We are all liable to err."

That afternoon I was up at a meeting of the Surgical Society which used to meet over in the Y. M. C. A. And a case of inoperable carcinoma of the stomach was reported by one of the men from the operating-room; and there was a young surgeon from out in Idaho who got up, and how he did lambast the general practitioner for not making a diagnosis earlier of carcinoma of the stomach. He said that general practitioners tide the patient along through various means, and finally the patient goes to the surgeon with a case of inoperable carcinoma. He said the general practitioner who does that is guilty of malpractice for allowing these cases of carcinoma of the stomach to go along to a point where they become inoperable. It was quite a tirade.

As soon as he got through I got up. I had just happened to have had a case which was in point. I said, "I object to the term 'malpractice,' and I ought to tell you of something which occurred right here today. I said I sent a patient up here and Dr. Robinson saw her, and Dr. W. J. Mayo was there and saw her, and others saw her, and they sent her home with a diagnosis of nervous symptoms due to the menopause. I said she has come back here right now with an inoperable carcinoma. I said, is Robinson guilty of malpractice? Is Plummer guilty of malpractice? Is Mayo guilty of malpractice? I said you would not dare say it. I said a diagnosis cannot be done in many cases. The diagnosis of middle-ear disease and what it is going to mean cannot be made in all cases."

I want to state that the specialist does not need to take so much credit to himself for making a diagnosis at the time when the patient comes to him.

DR. E. L. KENYON (Chicago, Ill.): Mr. President, may I say just a word?

I rise for a special purpose, which may or may not have some importance attached to it. And I address what I have to say particularly to the general practitioner.

The idea I have to express has reference to prophylaxis, to the prevention of ear infections, and what I have to say is a very simple statement, a very simple proposition, but, like many simple propositions, it seems to me it is worth stating, perhaps. At any rate you may judge of that.

I refer to the idea of preventing infection getting into the ear, so far as it can be done. You all know that you cannot do it entirely. If you do that, how can you do it? Is it practicable to do it? The infection gets in through the Eustachian orifice. They have on the market, in most drug-stores, what are called "douche cups." One of them is the Birmingham douche. They have that type of instrument. If Dr. Grosvenor will stand up here I would like to make a little point about this.

(Dr. Grosvenor stood up for purposes of illustration.)

You see the Eustachian tube passes from the nasopharynx back of the nasal space, and then passes practically horizontally, a little upward. Your Birmingham douche does this. Your patient leans away back here (illustrating), and the fluid or solution goes into the nose directly downward to the orifice of the Eustachian tube. Evidently something is wrong about that method of douching the nose. The theory is right in removing infection from the Eustachian tube, but that way of doing it tends to drive infection into the ears. There

is a method which is safe, and yet which, for instance, in acute rhinitis, may be followed by ear infection, is capable to a large extent of carrying infection away, and so tending to prevent ear infection.

Supposing the patient is down here in this position (illustrating by means of Dr. Grosvenor). The fluid goes in from below, and the Eustachian tube is upward. The chance of getting infection in the middle ear is nil.

My own practice, as routine, in acute infections of the nose, is to have the patient wash the nose with the simplest sort of fluid, say sodium bicarbonate, for instance. I put this in my pocket (indicating). I have this little, very simple apparatus, but, like simple things, an effective apparatus. This is too large, they are now making them smaller. Attached to this is a rubber tube and a bulb. The patient inserts this into the nose,—and children do it just as nicely. It is rather pleasant than otherwise. These places (indicating) are for the fluid to flow out. The tube is put in this way (indicating) about horizontally, and the patient leans over, and the bulb is worked. You do not always get to the Eustachian tube. If there is great swelling, you do not, but do get the nose washed out, and in many cases you get right to the entrance of the Eustachian tube. And there is no danger at all of carrying the infection on into the middle ear. I am so pleased with this apparatus and the work it does that I cannot help speaking of it. I formerly used atomizers for a similar purpose, but this is so infinitely more effective than an atomizer that I cannot help speaking of it.

Question: Would not a fountain-syringe apparatus work better than a bulb?

Answer: There is no objection to a fountain syringe. I think the bulb is rather better, because it is simpler perhaps, but a fountain syringe is entirely as practicable.

Question: Do you not get a more even pressure?

Answer: The point is, you give something to the patient which is simple and easy to use. That is my idea; so that the patient cannot refuse to use it.

DR. J. D. LEWIS (Minneapolis, Minn.): I did not have the pleasure of hearing Dr. Grosvenor's paper, but, judging from the discussion which it has excited, it is evidently a very interesting and informing essay.

I would like to speak just a few words about the manner of combating the sequelae which attend acute otitis media. First, our best weapon against brain and sinus involvement and extension to the mastoid is prompt and free drainage from the tympanum, not a mere puncture, for you would not do that in any other part of the body if you were seeking to drain a cavity, but a free myringotomy, and not a puncture. That is good surgery.

Secondly, any ear that continues to discharge profusely and persistently for a period exceeding two weeks means that you have at least an antral involvement, and the mastoid should be opened because that is the method by which you prevent the case from running into the chronic stage.

Fever, as an indication for mastoidectomy, is absolutely no guide, because you will find many cases of extensive destruction of the mastoid cells with the temperature running normally.

With reference to drops into the ear: I do not believe that they have any effect at all, because they simply form an admixture with the pus which is coming out, and do not reach the pyogenic membrane, and there-

fore can have no influence upon the source of the disease.

The leucocyte count in these cases is an excellent index of the condition in the mastoid cells. It seldom rises above 15,000. Usually it is about 10,000 to 12,000. When there is a leucocytosis attending an acute otitis media, it means that there is absorption, and that the drainage is inadequate. The otologist has learned not

to delay the opening of the mastoid, as he used to, until there are swelling behind the ear and fever. We now know that if the discharge extends over two weeks longer, and is persistent and profuse and pulsating, that at least the antral cells will be involved. A mastoidectomy at that time is an extremely simple operation, and the cases go on quickly to recovery.

SPINAL ANESTHESIA

BY FRANKLIN R. WRIGHT, M. D., F. A. C. S.

Assistant Professor of Urology, University of Minnesota
MINNEAPOLIS

Spinal anesthesia has a definite, limited field of usefulness. It is to be employed in cases requiring major operations on the lower part of the trunk or lower extremities only when, from any cause or condition of the lungs, heart, or kidneys, it is deemed unsafe to give a general anesthetic. This method of anesthetizing the lower part of the body has been both justly and unjustly criticized. It has been justly criticized because many men have gone to extremes in its use, and have used it on patients who could have safely taken general anesthesia. It has been unjustly criticized by a certain group of men who simply throw up their hands in holy horror of the whole procedure. These same men, however, will advocate, without hesitation, the puncturing of the spinal canal for diagnostic purposes. This attitude seems to me unjustified, since we know that a large percentage of the danger of spinal anesthesia is not from the anesthetic introduced, but in the surgical procedure of puncturing the canal and withdrawing the spinal fluid, which has been known to cause death.

As early as 1879, Drs. Bier and Seldowitsch of Kiel, Germany, suggested that injection be made into the subarachnoid space for the purpose of anesthetizing the lower half of the body. Later, they used cocaine in eight cases, but their results were not satisfactory. In 1885 Dr. Corning of Chicago made an injection of eucaine, and obtained a satisfactory anesthesia. Turrier of Paris was probably the first to use spinal anesthesia on a large scale. He used cocaine in his early work, but in 1899 began the use of stovaine, this drug being less poisonous than cocaine. The drugs that have been used in spinal anesthesia are cocaine, eucaine, stovaine, novocaine, and tropococaine. Three of these drugs, eucaine, stovaine, and novocaine, are synthetic compounds. Cocaine is an alkaloid from the ery-

thoxylon coca. Tropococaine is obtained as an alkaloid from the erythoxylon coca, and is also made synthetically. Cocaine and eucaine are not used as much as formerly, as both are cardiac depressants, and unfavorable symptoms often follow their use. Stovaine was quite popular when first introduced, but has fallen into disfavor because of its unpleasant effects on the respiratory centers. Tropococaine is probably more used at the present time than any other agent.

Spinal puncture must be considered as a major surgical operation. The back should be thoroughly sterilized over the entire lumbar region where puncture is to be made. Sterilization of this large field is made necessary by the handling which cannot be avoided in identifying the lumbar vertebrae, and locating the point where puncture is to be made. A needle that is just large enough to let the spinal fluid flow freely through it, and just three inches long, should be inserted between the second and third, or the third and fourth, lumbar vertebrae. It should puncture the skin three-fourths of an inch from the middle line, and be guided upward and inward, passing between the laminae of the vertebrae as far as the subarachnoid space, and no farther. In making this puncture the needle should be held so that the edge splits the fibres of the dura mater. By so doing, less pressure is required to force the needle through; consequently less shock occurs. The larger portion of the spinal fluid is contained between the arachnoid membrane and the pia mater, there being only a small portion between the pia mater and the cord. If the needle is passed deep enough to puncture the pia mater, only a few drops of spinal fluid can be withdrawn, and the anesthetic introduced remains confined over a small portion of the cord, and a limited area of anesthesia is produced. Through a needle thus introduced, eight to twelve cubic centimeters

of spinal fluid are withdrawn. In this spinal fluid is dissolved the anesthetic which is to be used, and it is returned to the spinal canal. I, personally, use one grain of tropococaine. This method of dissolving the anesthetic in the spinal fluid was first suggested by Dr. Morton of San Francisco. It has the advantage of limiting to the least possible amount the quantity of foreign material injected, and avoiding any dangers that might arise from an increased intradural pressure.

The area of the body that will be anesthetized by a given injection through a needle which is properly placed in the subarachnoid space, depends, first, on the amount of anesthetic introduced; and, secondly, on the position of the patient when the injection is made. If one grain, the usual dose of tropococaine, is injected between the third and fourth lumbar vertebræ, with the patient in the recumbent position, the area anesthetized is limited to the perineal and anal regions and the inner side of the thighs. If the spinal fluid is drawn, and the injection made with the patient sitting, and immediately after the injection the patient assumes the horizontal position, the anesthesia will include the legs and come somewhat above the pubes and Poupart's ligament. If, instead of assuming a horizontal position, the patient is placed in a high Trendelenberg position, the anesthesia will ascend as high as the umbilicus, or even higher. The loss of sensation is absolute, and the muscular relaxation is perfect, making ideal conditions under which to work.

The dangers of spinal anesthesia are three: (1) shock from puncturing the spinal canal; (2) poison from the anesthetic used; (3) secondary hemorrhage. Sometimes, following the use of tropococaine we get a contraction of all the vessels in the lower part of the body, so that, when incision is made, we find the tissues pale and little or no bleeding. If this condition prevails it is apt to be followed by secondary oozing three or four hours after patient is put to bed. Repeated trials have shown me that if this condition is met, and the patient is promptly given a full dose of thirtieth or twentieth of strychnine sulphate, the relaxation of the vessels promptly disappears, and there is no more oozing into

the wound than after an ordinary anesthetic.

With an experience of approximately one hundred twenty-five cases of spinal anesthesia, I have had three showing unfavorable effects. The first, a man something over eighty years of age, was given one grain of tropococaine. About the time the work of prostatectomy was completed, he began to get pale, and began to yawn just as though he were very tired and sleepy; and he kept this up four or five minutes, when it became necessary to use artificial respiration, which was continued for about twenty minutes. He recovered, and had an uninterrupted convalescence.

In the second case, the patient, a man, approximately seventy years old, was given spinal anesthesia for a prostatectomy, and, immediately upon making the injection, he fell into a state of collapse, so that artificial respiration had to be performed, which was kept up about fifteen minutes. This occurred too early to be due to absorption of the tropococaine used, and therefore must be attributed to shock or to the change in tension in the spinal canal. It might be well to say that this man had entered the hospital the evening before. He had been told by his family physician to be quiet the day before, and to go into the hospital in the evening. We learned afterwards that, instead of doing this, he had taken a team and made a drive of about twenty-five miles in a farm wagon to look after some business which he felt needed his attention before he was operated on. This may, or may not, have been the cause of the collapse. I might further add that this man died suddenly on the street six months afterward. He had never been operated on.

The third case was a man eighty years old, on whom I did a prostatectomy. This case was one I was very particular about, therefore I used the novocaine, said to be the least poisonous of all local anesthetics, using one and one-tenth grains. Anesthesia was complete, and just as our operative work was completed the patient became nauseated and pale, with pin-point pupils. This condition with persistent vomiting, with thin, thready pulse and pin-point pupils, persisted for forty-eight hours, when death occurred, which I attribute directly to novocaine poisoning.

THE JOURNAL-LANCET

Represents the Medical Profession of

Minnesota, North Dakota, South Dakota and Montana

The Official Journal of the

North Dakota and South Dakota State Medical Associations

W. A. JONES, M. D., EDITOR

ASSOCIATE EDITORS:

R. D. ALWAY, M. D. Aberdeen, S. D.

H. J. ROWE, M. D. Casselton, N. D.

H. E. FRENCH, M. D. University, N. D.

W. L. KLEIN, Publisher

K. O. KLEIN, Associate Publisher

Subscription \$2.00 a year

PUBLICATION OFFICE

839-840 Lumber Exchange Minneapolis, Minn.

DECEMBER 15, 1918

THE EDITOR AND THE PUBLISHER EXTEND THANKS AND NEW YEAR'S GREETING

The past two years constitute the most trying financial period of long duration ever experienced, in general, by the publishers of newspapers, magazines, and other periodicals. The cost of production has been so largely increased as to wipe out the profits of almost all such publications, to force many into debt, and to cause not a few to suspend. The publication business is peculiar in this respect: There is little or no opportunity to increase a paper's income in such times of stress, nor is there much opportunity to make retrenchments in some directions to meet, even partially, the increased cost in other directions.

THE JOURNAL-LANCET, of course, has suffered in common with all other journals; but the year 1918 ends with a surprise so gratifying to both editor and publisher that they wish to extend their sincere thanks to their friends from whom this surprise came—to the subscribers of the paper, not a few of whose names have been on its subscription roster for thirty years, many for a couple of decades, still more for a single decade, and some for a shorter time.

Under these circumstances, and under others familiar to our readers, our subscription bills and requests for renewal orders were sent out in October and November; and they were sent forth

under a feeling of some apprehension. The result was a pleasant surprise—indeed, a most gratifying surprise. The response was unprecedented in the history of the paper, at least for the past thirty-one years, during which it has been under the continuous business management of the present publisher; and its significance is unmistakable. The number of requests to discontinue the paper has been so small as to be negligible and to convince the editor that THE JOURNAL-LANCET occupies a field—great geographically and still greater professionally—which, in the estimation of our subscribers, still needs it.

The editor also believes, with abundant testimony to the soundness of his belief, that the paper has done a work wholly unique in character among minor medical journals, and that its influence upon the practice of medicine and upon the profession in the Northwest has been incalculable. A single phase of this work has been the interpretation of the spirit of the high-minded medical men, who were the pioneers in medicine in the Northwest and many of whom are yet in active practice, to the new-comers, to whom, it may be said to their credit, the high ideals of these respected pioneers strongly appealed, and by whom such ideals have been maintained.

THE JOURNAL-LANCET has done other work, of which we shall speak later; and it still has new work to do, with the promise of results quite equal to those attained in the past. The work of the past, and the work of the future, as we see it, is to make known and interpret the work of the profession to itself. Principally because of conditions growing out of the World War and its closing, we reserve the announcement of our plans for a future time, not far distant, however.

The editor and the publisher extend to the readers of THE JOURNAL-LANCET the New Year's greetings with the hope that whatever deters progress in the medical profession of Minnesota and her sister states—in short, that all things discordant—may pass away in 1919.

VACCINES AGAINST PNEUMONIA

The discussion on the subject of vaccines against influenza and pneumonia is still active and one medical journal after another decides for or against them. Consequently, the unfortunate reader is very much at a loss in his final conclusions, because his favorite medical journal says it is the proper thing to do, and his other favorite medical journal says it is unnecessary and use-

less, notwithstanding the reports of a Surgeon General's bulletin, in which it recites that a vaccine containing pneumococcus, Types I, II, and III, has prevented the development of pneumonia among the troops. Lister, in South Africa, believes it almost a specific; but every sort of report can be obtained, and when the whole question is summed up, the physician is in doubt unless he chances to be one of the violent enthusiasts, and believes that whatever he does is right.

We quote from a letter recently received from the chief of the medical service in a large camp, in which there were over three hundred cases of pneumonia in the wards, giving, very naturally, an opportunity for wonderful clinical advantages, observation, and study. A special commission from one of the chief endowed research laboratories has been sent to this special camp to study pneumonia, and particularly the vaccines to be used in the prophylaxis of this disease. The chief of the medical service says that, incidentally, a large number of men have also been vaccinated against influenza, but he does not find that the influenza vaccine is preventing the disease, as there are plenty of men in the wards with influenza who were vaccinated weeks prior to the onset.

He further says: "We do not find that the pneumococcus vaccines prevent pneumonia. Almost every man of the three hundred in the wards with pneumonia has been vaccinated against Types I, II, and III pneumococcus, and nearly all have pneumonia, caused by pneumococcus Type IV, and from 27 per cent to 30 per cent of these patients die. The whole ground must be gone over after more work has been done." The general impression in this specially quoted camp among all the clinicians is that "vaccines lower the resistance of the men, and they are better off without them. Hence, it is important that practicing physicians should know this, so that they can wisely advise their patients relative to the use of these vaccines."

Here is presented a contrasting opinion, based upon clearly presented evidence in a large number of influenza and pneumonia cases. In Minneapolis there has been a recurrence of the epidemic of influenza, fortunately milder than the one of six weeks ago, and with a lower death-rate. It occurs more often among children than among adults, and yet the number of cases is so great that the majority of public schools in Minneapolis are again closed. The theaters remain open, the churches remain open, and the various

gatherings of people for entertainments, music, and even the out-of-door War Chest huts are crowded almost to suffocation. The people evidently are more or less indifferent, as almost anything in the form of amusement and diversion attracts large crowds, even though it is well believed that influenza and pneumonia bacilli are floating in the atmosphere.

The editor wishes at this time to call attention to a part of his former editorial in the preceding issue, relative to the procuring of vaccines. Either through a misinterpretation or an unintentional error the impression got out that the Rosenow serum is not furnished to physicians free of charge. This idea was not intentional at all, for it is well known that Rosenow and the University laboratories furnish all the vaccines that any doctor may need, free of charge. The only request they make is that the retainers be returned to the laboratories, because it is more or less difficult to get small vials at this time.

RECONSTRUCTION FROM WAR WOUNDS AND WAR STRAIN

The War Department at Washington has given out some figures recently, which are very interesting. They show that the number of casualties in the American army was approximately two hundred and sixty-odd thousand. The majority of them are what the war surgeon prefers to call mild, and this includes shrapnel wounds of the abdomen, intestines, and other viscera. The grave cases are those in which there is a leg or an arm gone, a fracture of the skull, or a fracture of the spine, with the resulting paralysis, and other wounds that are mutilating and destructive. The mild cases by the average surgeon of this country, not under war conditions, would be considered grave or severe; but, evidently, the resisting power of the well-trained and well-developed soldier is much greater than that of the civilian. It is reported that there are approximately fifty thousand dead among the casualties; and, according to Col. Frank Billings, head of the Reconstruction Department, there will be about fifteen thousand who will need reconstruction aids. This is a much smaller number than could possibly be expected, and, doubtless, these cases can all be cared for by hospitals, including base hospitals and hospitals in the cities.

There are between five and six hundred men now at Ft. Snelling who will have to be restored,

repaired, and re-educated; and it is probable that many of them will be taught an occupation which is gainful and which will clear the soldier from the need of charitable aid. Very naturally, in all these hospitals there will be a certain number of men who will need reconstruction aid, who either desert or demand to be returned to their homes; and in some instances their requests will be promptly granted. The few who take sudden leave without permission will be the ones who will, in the end, become either a public or a private charge, but among a number of the hospitals in the Northwest the distribution of the few incurable men will be an easy matter to adjust. The Government is determined, as far as possible, to put every man on a normal basis; to give him the best opportunity for learning a trade or some kind of a useful occupation, in which he will be contented, even though he be deprived of the use of his muscles or limbs.

Most of the surgeons have had more or less experience in Europe in reconstruction methods, so that they do not come back entirely at sea as to what reconstruction means. A good many of the men have been trained near the front line. Special hospitals were organized for this definite purpose, and every surgical and mechanical aid was employed, so that the further treatment of the wounded men would be simplified in this country.

In order to treat the nervous and mental cases the work must be begun at the earliest possible moment, before the mental attitude of the wounded man has changed. An impression is made upon him at once by a careful examination, and by careful restoration of injured nerves, or other structures. Then the re-education is started, after carefully explaining the nature of the disability to the man himself, thus securing his personal co-operation in the work.

Among the war wounds are the injuries to nerve trunks. The time required for the recovery of a broken nerve varies in different individuals. In many cases it may take from one to two years for the nerves to regenerate or regrow. Much suturing of nerves has been done. As has been said before, sufficient time has not yet elapsed to know how far these cases can be restored. We all know from experience in men with injuries to important structures that the time element is very important, and we know, further, that the courage and cheerfulness of the individual are to be constantly kept up.

In the war-strain cases, where the mental side predominates, there has been much excellent work done: first, by careful investigation of the individual; next, by proper and scientific suggestions, explaining in detail why such and such symptoms are present, and in this way securing again the confidence of the war-strained man, and keeping his courage up to the highest possible point. Re-education of muscles and of nerve trunks is very important. This requires time and discipline. Bad habits are very easily acquired, but they are dropped only after long and persistent effort.

It depends largely upon the physician and surgeon as to what percentage of recoveries he may expect. If he understands the physiology of the nervous system, and his patient is not severely wounded, and if he is himself possessed of sufficient personal persuasive power, he may hope for a large percentage of recoveries. Under appropriate circumstances, and when treatment is begun at an early time, 90 per cent of the various neuroses and mild psychoses may recover, and sometimes as high as 98 per cent recover. Of course, the percentage of recoveries over such a large field of wounded and of the various types of wounds probably is reduced from 26 per cent to 50 per cent.

The Department of Vocational Training, unless it is warmly supported by the medical profession, particularly as it is composed largely of lay members, will not get as good results; but, if the medical profession assist in all of its departments, then the percentage among those receiving vocational treatment will be correspondingly increased. We all look forward with interest to the work to be done in our own state, and, if it can be supervised and managed by the Surgeon General's Office and the War Department; it will be successful. If it is to be managed by lay people and voluntary workers, who many times are uneducated and untrained themselves, the degree of success will be decidedly lessened.

THE VERDICT OF THE MEDICAL PROFESSION IN MINNESOTA, AND ITS INTERPRETATION

Enough time, several months, has now passed since the final act of the small group of men who introduced the methods of political tricksters into the Minnesota medical profession at the risk of its disruption—enough time has passed to obtain the verdict of the profession and an interpretation of the scheme of these tricksters.

When the ring-leader of this group, Dr. Edward W. Buckley, of St. Paul, at the Duluth meeting of the State Association, announced that he would follow the traducer of his reputation "into the bowels of Hell," his language, though not at all polite or refined, was wholly appropriate to any man who thinks his reputation has been besmirched in public print. Such language really becomes traduced manhood, and Dr. Buckley's friends must have momentarily rejoiced in it; but when Dr. Buckley discovered that when Dr. Jekyll entered "the bowels" he would find only Mr. Hyde there, he cut short his proposed journey. The discovery was made when Dr. J. Warren Little read Dr. Jekyll's words in the transactions of the previous meeting of the Association. And when the discovery was made the trickster became the parliamentarian, but not successfully. The identity of pursuer and pursued was established. The reputation is still tarnished beyond restoration.

When Dr. Earl R. Hare made the point that it was unfair to discuss the fulfillment—a subject not at all under discussion at that time—of the promises made by the advocates of an association-owned journal, and said that the Committee's report would throw light upon the point, he must have already seen the report or been informed as to what it would show.

And what did it show to Dr. Hare or to anyone else?

It is difficult to deal with this report. Like Dr. Hare, every member of the House of Delegates, probably including members of the Publication Committee, the chairman of which read and, presumably, made out the report, was desirous of seeing a favorable report.

We repeat that it is difficult to deal with this report. Here is a financial statement covering the work of the first eight months of a trust, where suspicion of the motives of those conducting the new enterprise was well-nigh impossible because they were medical men of good repute. An account is given of the receipt and expenditure of several thousand dollars under headings called "assets" and "liabilities." Under one item of this report money *to be earned* is called an "asset," and money received, as shown by the report of the treasurer of the Association (Dr. Hare), who made the point and the plea noted above herein, is not at all mentioned as a specific item.

Far be it from us to intimate, or even to suspect, that the report of the Publication Committee, made by its chairman, Dr. R. E. Farr, bears

the slightest evidence of financial irregularity. It is simply illiterate, and conveys no meaning whatever as to the financial condition of the new enterprise, which has been conducted wholly by the Publication Committee. This fact has been pointed out in these columns before this, and yet the members of this committee seem content to leave the House of Delegates and the entire membership of the State Association in the dark for an entire year. What do the members of the Publication Committee think of this aspect of the case?

And what will be the result of the work of this group of tricksters?

The answer is well put in the following extract from a letter from a Captain in the Medical Corps, sent with the renewal of his subscription to THE JOURNAL-LANCET:

"I wish to express my utter disgust with the medical politics injected into the profession by If it does not cease, not only will the medical journalism of the Twin Cities be disrupted but the fellowship and necessary unity in the profession will irreparably suffer."

Like sentiments come to us from all parts of the state, orally and in writing.

The above charges, based upon indisputable facts, are treated by this small group of physicians, led by a man who said before the House of Delegates that he had never attended a meeting of the State Association prior to the one at which the subject of an association-owned journal came up—these charges are treated with silence!

Is it comprehensible?

CORRESPONDENCE

FREE INFLUENZA VACCINE

TO THE EDITOR:

It has been brought to our attention that in your editorial of November fifteenth on "Prophylactic Vaccines" the impression is given that the vaccine which has been made by Doctor Rosenow, of The Mayo Foundation, has not been distributed free of charge. This is so contrary to the real facts that it would seem only proper to correct the false impression.

The Mayo Foundation is sending the vaccine prepared by Doctor Rosenow gratis to any physician upon request, as is shown by the following paragraph from a circular letter forwarded by

Doctor Rosenow with each package of vaccine:

The vaccine is supplied gratis by The Mayo Foundation for study. I am therefore enclosing an outline which will serve as a skeleton for the record of individuals inoculated, and will ask you to give us the information asked for in order that we may obtain accurate data regarding the value of prophylactic inoculation.

In not a single instance has any charge for such vaccine been made, nor has any money been accepted. Because of our inability to meet the demand, the formula was given on request to several laboratories with the understanding that the names of Dr. Rosenow and The Mayo Foundation be not employed. It is possible in some instances patients have been overcharged by the physician who administered the vaccine, but The Mayo Foundation can in no way be held responsible for such action.

The effort which is being made by The Foundation to assist in controlling the present pandemic of influenza is following out one of the original conceptions of the purpose of the Foundation, namely, that in periods of emergency or of epidemic its facilities should be placed at the service of the people.

Sincerely yours,

W. F. BRAASCH, M. D.,

Acting Director, Mayo Foundation for
Medical Education and Research.

Rochester, Minn., November 26, 1918.

REPLY

THE JOURNAL-LANCET had no thought of giving the impression that Dr. Rosenow's vaccine is not distributed free of charge, as is done in the City and University Hospitals in Minneapolis.

The statement made in our editorial in regard to overcharging physicians was based upon the fact that two or three flagrant instances in Minneapolis were known to us, and it was fair to presume that other physicians were doing the same.

We are glad to give further publicity to the fact that the Mayo Foundation furnishes the vaccine gratis. —THE EDITOR.

BOOK NOTICES

SURGICAL TREATMENT. A Practical Treatise on the Therapy of Surgical Diseases for the use of Practitioners and Students of Surgery. By James Peter Warbasse, M. D., formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn, New York. In three large octavo volumes, and separate Desk

Index Volume. Volume I contains 947 pages with 699 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Per set (Three volumes and the Index Volume): Cloth, \$30.00 per set.

If the remaining volumes of Warbasse's Surgery compare at all favorably with the first, it will be a work of great merit.

The first volume has the rather unusual distinction of being very definite in its statements. It does not deal in generalities, which is a too frequent fault of various text-books. For this reason it is a book especially valuable to the younger surgeons, who desire and require definite information rather than a lot of smooth reading, which gives no definite impression.

The consideration of the newer methods of treating unclean wounds and ulcers is especially valuable, as is also the part of the volume on the general surgical principles and surgical material.

It is a book which would be an essential addition to any library.

—DUNSMOOR AND FANSLER.

LOCAL AND REGIONAL ANESTHESIA, including Analgesia.

By Carroll W. Allen, M. D., of Tulane University, New Orleans, with an introduction by Rudolph Matas, M. D., of Tulane University, New Orleans. Second Edition, reset. Octavo of 674 pages with 260 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$6.50 net.

In this volume is given a history of the development of local anesthesia and the perfection of technic. It contains a chapter on spinal, epidural, paravertebral, and parasacral analgesia and other applications of local and regional anesthesia to the surgery of the eye, ear, nose and throat, and dental practice. A very instructive study of pain, with the anesthetic effects of pressure-anemia of cold and water, is given; and the effect and preferable preparations in use for producing local anesthesia are fully gone into. It is a most admirable work on a subject that is not yet fully appreciated by the medical profession as a whole, and ought to be read by every man in the profession doing surgery.

—BAKKE.

ESSENTIALS OF MATERIA MEDICA AND THERAPEUTICS FOR NURSES. By John Foote, M. D., of Providence Hospital, Washington, D. C. 310 pages, \$1.75, net. Third edition, revised. Philadelphia: J. B. Lippincott Co.

The brief, simple, well-classified subject matter recommends this text-book for short courses or for review work. The chapter on administration of medicine is comprehensive, and that on the hypodermic method is especially well given. The classification of drugs also deserves special mention, as well as the table on disinfection, including articles to be disinfected, the disinfectant to be used, the form and strength and the minimum duration of exposure.

This third edition contains a number of reference tables, namely, poisons and antidotes, drugs and dosage, hypodermic dosage, synopsis of principal actions and uses of drugs, and the newer antiseptics used in military surgery.

The author says he has given amplified sections in solutions and fractions. There is amplified explanation of different methods for working problems, but few problems. Quoting the author himself: "Why impose

upon the student the task of culling the necessary knowledge from a confusing mass of facts?" Since the proportion method will solve all problems, why confuse the student with a half dozen other methods?

—EASTBY (Eitel Hospital).

ABSTRACTS OF WAR SURGERY. An abstract of the war literature of general surgery that has been published since the declaration of war, in 1914. Prepared by the Division of Surgery, Surgeon General's Office. Cloth. Price, \$4. Pp. 305, with 97 illustrations. St. Louis: C. V. Mosby Company, 1918.

This compilation of abstracts of one hundred twenty-one articles is interesting, not only to the military surgeon, but to every one engaged in traumatic surgery. Most of the abstracts are excellent and a number of them have been abstracted with a small amount of paraphrase. The subject matter is divided up under the following chapters:

"General Topics"; "Wound Infection and Treatment"; "Tetanus"; "Gas Gangrene"; "Abdomen"; "Chest"; "Cardiovascular Surgery"; "Joints"; "Fractures"; "Burns"; "Anesthesia in Warfare"; "Trench-foot"; "Foreign Bodies"; "Peripheral Nerve Injuries"; and "Jaws and Face."

The book is filled with practical hints to the surgeon, and, as before said, should be in the hands of every one who does traumatic or industrial surgery.

—GEIST.

RED CROSS MEMBERSHIP

No other action by Americans at Christmas will mean more to a suffering world than the virtual enrollment of the entire nation as members of the American Red Cross. To effect this testimony of our intention to maintain relief work, the week of December 16-23 has been designated for the Red Cross Christmas Roll Call.

During this week the present membership of 22,000,000 adults will be asked to renew their allegiance and all other citizens will be invited to join. With our thoughts centered upon the boys in the army and navy, and with the appeals coming insistently from every nation involved in the war on our side, this Christmas will be memorable in the manner of its observance. Let our Christmas message to the world be that we stand solidly behind the American Red Cross.

The coming of peace will not lessen the need of relief. All indications point rather to a larger demand upon American generosity. Therefore, the news that Fifty Million Americans, or more, have indorsed the Red Cross through enrollment as members will have a far finer significance than the mere money represented in dues.

What the American Red Cross wants this Christmas is the approval of the American people. To give YOUR approval, all you need is a heart and a dollar!

WINTER SPORTS FOR CHILDREN

Last summer over 150 boys and girls, of all ages under ten, were taken daily to the public parks of Minneapolis by workers of the Anti-Tuberculosis Committee and regaled with supervised play and unlimited crackers and milk. All were frail and anemic, and lived in the congested districts of the city; but a survey made by the Visiting Nurses has revealed the fact that not one of them has developed influenza during

the recent severe epidemic. The nurses attribute their good health to the powers of resistance built up during the days of the activity in the open air. As a result of this satisfactory experiment, the Children's Year committee of the Woman's Council for National Defense is planning to inaugurate supervised skating and winter sports for children during the coming months. Funds are now being sought for the purchase of skates and the engaging of competent supervisors. "If supervised summer play proved so beneficial, why shouldn't we start supervised winter sports?" asked the women of the committee, of which Mrs. Marshall H. Coolidge is chairman.

ANTISPITTING CAMPAIGN

An intensive antispitting campaign was launched by the Anti-Tuberculosis Committee of Minneapolis during the week beginning November 24. During the week, 75,000 leaflets warning against the spread of disease by spitting were distributed through schools, factories, and libraries, with the aid of the Motor Corps of the local chapter of the Red Cross. Boy Scouts placarded offices and stores in the downtown parts of the city, and, at the request of superintendents and foremen, special posters were provided for large industrial plants. The names of recent influenza and pneumonia patients were obtained from physicians, and they were sent letters and literature of advice as to after-care in protecting others and in guarding against a re-infection themselves.

NEWS ITEMS

Dr. M. U. Ivers has moved from Abercrombie, N. D., to Christine, N. D.

Dr. G. A. Renz, of St. Paul, is critically ill, and is at St. Joseph's Hospital.

The Mork-Watson Hospital, of Worthington, has installed a complete x-ray plant.

Albert Lea is to employ a public health nurse for an experimental period of six months.

Dr. John L. Poppe, of Haley, N. D., died on October 27, of influenza, at the age of 35.

Capt. A. C. Tanner, of Minneapolis, returned home from Fort Riley, Kas., a few days ago.

Work is progressing rapidly on the three-story addition to St. John's Hospital, of Red Wing.

Capt. A. E. Benjamin, of Minneapolis, returned home from Camp Wheeler, Ga., last week.

Dr. L. H. Hilger, of St. Paul, was married last month to Miss Mary Gleason, also of St. Paul.

Dr. F. E. Peterson, of Graceville, will move at once to Granite Falls to take up the practice of the late Dr. Kerns.

Capt. G. H. Dahlquist, of Lancaster, passed through Minneapolis a few days ago on his way home from Camp Sevier.

Dr. Albert R. Richey, of Herreid, South Dakota, died last month, leaving that town of 500 inhabitants without a physician.

A Spanish edition of the *Journal of the American Medical Association* is to be published for circulation in the South American states.

Dr. Leslie Lane, of Minneapolis, has been appointed medical officer of the Minnesota branch of the Federal Board of Vocational Education.

Drs. Charles F. Dight and Elizabeth Woodworth, of Minneapolis, attended the Public Health Association meeting in Chicago last week.

Most of the public schools of Minneapolis were closed for the second time last week, the influenza epidemic has increase after a temporary subsidence.

Capt. Paul F. Brown, of Minneapolis, was recommended for promotion to the rank of major for distinguished service in the battle of Argonne.

Major Geo. Douglas Head has been appointed chief of the Medical Service of the Base Hospital at Camp Wheeler, Ga., where he went several weeks ago.

In a total of nearly 12,000 cases of influenza reported in Minneapolis up to November 25, there were only 623 deaths, or a mortality-rate of 4.7 per cent.

Capt. Paul F. Brown, of Pipestone, was recommended for promotion to the rank of major for distinguished and heroic service in the fighting at Argonne.

A physician is needed at Westbrook, Minn., where a good country practice awaits a man. Information can be obtained from Dr. C. N. Nelson, of Minneapolis.

Dr. K. A. Danielson, of Litchfield, reached Minneapolis on his way to Camp Greenleaf, Ga., when he was ordered back to cope with the epidemic in that place.

Henning, a range village of six hundred people, asked an outside expert to remove the tonsils of a score of school children; and other range towns have done likewise.

Lieut. Commander C. E. Henry of the Hospital Ship Solace, visited his home in Minneapolis last week. Lieut. Henry organized the first navy hospital unit in the Northwest.

The Southern Practitioner has decided to suspend publication with the end of its fortieth volume this month. *The Medical Review of Re-*

views, of New York, takes over its subscription list.

Dr. William E. Robinson, of Rapid City, S. D., died last week at the age of 47. Dr. Robinson formerly practiced at Spearfish. At the time of his death he was mayor of Rapid City.

Dr. Arthur M. Wooster, of Rockford, died last month at the age of 31. Dr. Wooster was a graduate of the Medical School of the University of Minnesota, Class of 1911.

Lieut. Theodore H. Sweetser, now with the Army in France (or Germany?) has been promoted to rank of captain. Our readers have enjoyed several of his graphic letters from France.

Dr. J. P. Sedgwick, of Minneapolis, has been appointed consulting hygienist on pediatrics to Surgeon General Blue. The appointment will not take him away from his work in Minneapolis.

Miss Sophia Vetterhus, a nurse of Sioux Falls, S. D., who volunteered to go to a stricken town in that state where the physicians could not cope with the influenza, died of the disease last month.

Dr. James Flemming, of Cloquet, who lost his hospital when that city was destroyed in the recent forest fires, announces his intention of erecting a modern hospital building in the spring.

The Government has given permission to the McKennan Hospital, of Sioux Falls, S. D., to proceed with work on its new building, which is now enclosed and ready for the interior finishing.

Dr. H. H. Gammons, of Deerwood, has resigned as superintendent of the Deerwood Sanatorium, to accept a position in Texas as director of the publicity department of the Texas State Tuberculosis Sanatorium.

Physicians in the Northwest will do the public a large service by urging young women to take a short training course for nurses offered by the University of Minnesota when such women do not want to take a full course.

The members of the draft boards of the country are seeking other gratuitous work to do. These boards have done a large service for the country, and most of their members deserve honorable mention, if not "major" titles.

Major A. T. Mann, of Minneapolis, is expected home by Christmas. Major Mann was in a group of three hundred medical officers who were mobilized for immediate sailing, when orders to go abroad were countermanded.

Dr. Joseph F. Borghoff, of Butte, Mont., died last month, of influenza, at the age of 33. Dr.

Borghoff was a graduate of Creighton, and, at the time of his death, was a member of the staff of the Montana State Hospital at Warm Springs.

The Minnesota Academy of Medicine met last week. The program consisted of a symposium on influenza, by the following Minneapolis men: Drs. J. G. Cross, E. J. Huenekens, J. C. Litzenberg, W. A. Jones, W. P. Larson, and E. T. Bell.

The "End of the Road" is the title of a new movie gotten up by the War Department for use in the social hygiene movement. The Minnesota State Board of Health has the film, and it will be exhibited under the direction of Dr. Mabel Ulrich.

Dr. Andreas A. Wipf, of Freeman, S. D., died last month at the age of 50. Dr. Wipf had practiced in Freeman for twenty-five years, and had been prominent in that part of the state for many years. He was at one time a member of the legislature.

Dr. Moriwer Herzberg, who has been at the head of the pathological department of the Medical School of the University of South Dakota, at Vermilion, has become director of the Pathological Laboratories of St. Joseph's Mercy Hospital of Sioux City, Iowa.

Miss Lydia E. Whiteside, of Duluth, who went abroad as a nurse with Hospital Unit No. 26, generally called the University Unit, died, in France in October, of pneumonia following influenza. She was greatly beloved by all associated with her in hospital work.

Dr. G. Oppliger, of New Ulm, whose last address was Hamilton, a rural route point near Savage, Scott County, Minn., has not been heard from by his wife since July 25, 1917. She says there is no charge against him of any kind, and she will be thankful for information concerning him.

Drs. Walter Schmidt and W. L. Tift, of Glencoe, though not partners, have installed an x-ray machine for joint use. This plan should commend itself to other physicians in all the smaller towns of the Northwest. The x-ray machine is a well-nigh indispensable apparatus in every village.

Havre, Mont., has made vaccination for protection against influenza compulsory to clerks and

others serving the public in like manner. Persons affected with influenza will be quarantined, and for some time after the ban is raised only vaccinated persons will be admitted to public assemblies.

A small volume, entitled "Information for the Tuberculous," by Dr. F. W. Wittich, of Minneapolis, has just been published by the Mosby Company of St. Louis. Dr. Wittich is an instructor in medicine in the University Medical School, and physician in charge of the Tuberculosis Dispensary of the University.

Two delegations from Milwaukee, Wis., have recently visited the St. Paul City and County Hospital to obtain suggestions in the planning of the \$2,000,000 hospital Milwaukee will soon erect. This is a great compliment to the St. Paul Hospital, of which Dr. A. B. Ancker is the guiding genius in its building and conduct.

The following were elected officers of the Minnesota Academy of Medicine at its recent annual meeting: President, Dr. J. F. Christison, St. Paul; vice-president, Dr. H. B. Sweetser, Minneapolis; secretary-treasurer, Dr. F. E. Leavitt, St. Paul; executive committee, Dr. H. P. Ritchie, St. Paul, and Drs. C. M. Carlaw and H. W. Jones, Minneapolis.

To safeguard the health and morale of our soldiers' families and those of our Allies, the Red Cross has appropriated millions for the anti-tuberculosis campaign in the United States next year and for similar work in France, Italy, and elsewhere. Ten Red Cross Seals will be awarded to each new member of the Red Cross to indicate his share in this world-wide campaign. No seals will be sold this year.

The following nominations for officers of the Hennepin County Medical Society were made at the December meeting, and will be voted upon at the January meeting of the Society: For president: Drs. H. W. Jones, J. C. Litzenberg, and A. E. Hedback; for delegates: Drs. J. G. Cross, R. E. Farr, L. A. Nippert, J. E. Hynes, Robt. Williams, E. L. Gardner, T. A. Peppard, C. O. Maland; for alternates: Drs. Nimrod Johnson, E. J. Huenekens, C. P. Nelson, J. S. Reynolds, G. W. Bass, C. M. Roan, and C. E. Dutton.

POSITION WANTED

Physician wants a position, preferably with an elderly physician, in a small town. Object principally to gain more rapidly practical knowledge. Address 171, care of this office.

LOCUM TENENS WANTED

A firm with a large practice in a fine Minnesota town wants an assistant to whom a good salary will be paid. To the right man, one who can do some surgery, the work will probably be permanent. Address 159, care of this office.

ASSISTANT WANTED

A single man, one who is willing to work, to assist me in my general practice. Will pay a very liberal salary. Send references and write, wire, or telephone Dr. W. C. Fawcett, Starkweather, North Dakota.

\$6,000 PRACTICE FOR SALE

A \$6,000 practice in modern Minnesota village of 600; no opposition; large prosperous farming community; German Protestant element predominating; steam-heated suite of office rooms. No real estate for sale. Address 165, care of this office.

LOCUM TENENS WANTED

A man to take charge of my practice for two months beginning January 1, 1919. General practice, obstetrics

OFFICE PRIVILEGE IN A DOWN-TOWN MINNEAPOLIS OFFICE WANTED

A physician whose practice is mainly in the outlying residential district desires office privileges down-town for one or two hours mornings. Address, with information, 169, care of this office.

POSITION WANTED BY AN INTERNIST

An internist desires association or position with a group of doctors, surgeons, or a corporation. Graduate of A1 medical school. Two years' hospital work; five years' general practice. Age, 35. A1 credentials. Personality. Address 170, care of this office.

PRACTICE FOR SALE

A Wisconsin \$6,000 practice, unopposed, in a town of 500; 12 miles to nearest competition; on Burlington R. R. Wealthy, prosperous farmers. Price, \$600. Am going to larger city, and will give possession at once. Part cash and bankable note accepted. Address for full information 168, care of this office.

ASSISTANT PHYSICIAN WANTED

We want a young man who has had one year's internship and, preferably, with some experience in general practice. He must be well up in internal medicine and laboratory work. A general knowledge of x-ray and cystoscopic work would be appreciated, but not essential. He will do both general practice and hospital work. A Scandinavian preferred. He must be thoroughly honorable and furnish high-class references. He will be paid a good salary for a year or two, with the view of giving him an interest in the business. This is an excellent opening with a firm in a good Minnesota town. Address 167, care of this office.

and surgery. Am unopposed in a good community. He can have all he makes. Address No. 164, care of this office.

INSTRUMENTS, ETC., FOR SALE

The instruments and supplies of a recently deceased physician are offered for sale. They include a Leitz microscope with oil immersion. Call at The Concord, 11th St. and Mary Place, Minneapolis.

PRACTICE FOR SALE

In a South Dakota town of fine prosperous country, county seat, 800; 95 per cent collections; no competition. Office fixtures, etc., for sale. Going east to study. Write at once for particulars. Address No. 163, care of this office.

PHYSICIAN WANTED

Physician for the Out-Patient Department of the City and County Hospital of St. Paul; attractive salary with maintenance and use of car. This is an unusual opportunity for a man wishing to build up a city practice. Answer with full particulars,—age, married or single, experience, references, etc. Address Arthur B. Ancker, Superintendent, City and County Hospital, St. Paul, Minn.

OFFICE EQUIPMENT FOR SALE

Here is an excellent opportunity for a physician to buy an exceptionally fine office equipment, including a new X-ray outfit, etc., and to step into a fine practice. Office is located in the heart of a Minnesota town of 16,000 inhabitants with only seven physicians. Large country territory. Must be taken at once. Reason for selling, decease of owner. Address 158, care of this office.

POSITION IN PHYSICIAN'S OFFICE BY A CAPABLE WOMAN

Qualification: Applicant has had six years' teaching experience in commercial subjects, two years as principal of the shorthand department; three years' work in general office work, and one year of medical work as secretary in a large clinic, doing the stenographic work, including dictation during the history-taking and operations; can handle any medical dictation, and can do reception-room work; will be glad to take up and learn laboratory work. The best of references will be furnished. Address 172, care of this office.

NEW ORLEANS POLYCLINIC

The Graduate School of Medicine of the Tulane University of Louisiana, thirty-second annual session, opened Sept. 23, 1918, and closes June 7, 1919. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory and cadaveric work. Special attention given to military matters. For further information address Charles Chassignac, M. D., Dean, postoffice drawer 770, New Orleans. Tulane also offers highest class education leading to degrees in medicine, pharmacy, dentistry.

INDEX TO VOLUME XXXVIII

ARTICLES

Anesthesia, local, in inguinal hernia - - -	534	Neck, some tumors of the - - - - -	436
Anesthesia, spinal - - - - -	714	Nerves, peripheral, injuries to, observed in soldiers returned to this country for reconstruction - - - - -	585
Abdomen, acute - - - - -	342	North Dakota state medical association, president's address before the - - - - -	461
Albuminuria, orthostatic-cordotic, with report of case - - - - -	31	North Dakota state medical association, transactions of the, thirty-first annual meeting - - - - -	461
Anesthesia, local, the possibilities of, in major operations - - - - -	153	Nurses, pupil, the training of from affiliated schools - - - - -	686
Aviation, the vestibular apparatus and its relation to - - - - -	155	Nursing problem, the, in the small hospital - - - - -	201
Base hospital No. 26, history of the University of Minnesota - - - - -	16	Ophthalmia neonatorum, the cause of preventable blindness - - - - -	530
Bathing-beaches, sanitary suggestions regarding the location, construction, and management of public - - - - -	349	Otitis media, acute suppurative - - - - -	710
Baths, investigation of Lake Calhoun public, May to November - - - - -	105	Pellagra: a report of five cases - - - - -	95
Birth-control, to what end is, leading us? - - - - -	569	Pituitary extract - - - - -	35
Brain and spinal cord, recent advances in the surgery of the - - - - -	313	Placenta, premature separation of the, with concealed hemorrhage - - - - -	14
Brain tumor, ocular symptoms of - - - - -	70	Pneumonia: a synopsis of forty-seven recent cases - - - - -	341
Cancer, the part the x-ray plays in the treatment of - - - - -	190	Pneumothorax, artificial—a demonstration - - - - -	252
Carcinoma, colloid - - - - -	567	Pneumothorax, artificial, lung and chest wounds treated by - - - - -	650
Cirrhosis, the liver and portal or multilobular - - - - -	105	Poliomyelitis, acute, the etiology and treatment of - - - - -	624
Colon, gastropsis and ptosis of the transverse - - - - -	75	Preventive medicine in railway work - - - - -	91
Constitutional psychopathic states, the - - - - -	507	Problems, the, before the medical men of the Allies - - - - -	651
Contracted sockets, operative procedure for the relief of - - - - -	225	Prostatic enlargement, instructive case of diffuse, with circumscribed medial tumor and sacculi of the bladder - - - - -	448
Empyema abscesses, skin-flap implantations to cure old suppurative lung-abscesses and - - - - -	5	Psychopathic states, the constitutional - - - - -	507
Experiences in France - - - - -	591	Sapremia, etiological relation of, to senility - - - - -	77
Eye-ball, penetrating injuries of the - - - - -	33	Selective dratt regulations and medical revisory boards - - - - -	599
Feeble-mindedness, syphilis in its relation to - - - - -	215	Senility, etiological relation of sapremia to - - - - -	77
Feeding, artificial, of infants - - - - -	433	Shock, treatment of surgical - - - - -	43
Fistula, the closure of fecal - - - - -	185	Skin-flap implantations as a radical measure to cure old suppurative lung-abscesses and empyema abscesses - - - - -	5
Fractures and malpractice suits - - - - -	132	Skull, fractures of the - - - - -	401
Fractures of the skull - - - - -	401	South Dakota state medical association, address of welcome to the - - - - -	441
France, experiences in - - - - -	591	South Dakota state medical association, roster of - - - - -	387
Gall-bladder surgery, some observations in - - - - -	504	South Dakota state medical association, thirty-seventh annual meeting, president's annual address before - - - - -	373
Gastropsis and ptosis of the transverse colon - - - - -	75	South Dakota state medical association, thirty-seventh annual meeting, transactions of - - - - -	373
Graduate work in medicine in the University of Minnesota - - - - -	1	Stammering, the problem of, and its solution - - - - -	555
Heart, graphic methods in clinical studies of the - - - - -	251	Surgery of the brain and spinal cord, recent advances in the - - - - -	313
Hernia, inguinal, local anesthesia in - - - - -	534	Surgery, war - - - - -	617
Hospital problems resulting from the war - - - - -	355	Symblepharon, total - - - - -	40
Hospital survey - - - - -	355	Syphilis in childhood - - - - -	158
Hospital, the community, a war-time necessity - - - - -	354	Syphilis in its medical, its general, and its sociological aspects - - - - -	222
Hospital, the nursing problem in the small - - - - -	201	Syphilis in its relation to insanity - - - - -	220
Infant mortality - - - - -	501	Syphilis in relation to feeble-mindedness - - - - -	215
Infants, artificial feeding of - - - - -	433	Tendon-tucker, a new - - - - -	680
Infection, focal, in the mouth, nose, and throat - - - - -	620	Tetanus, a case of post-vaccination - - - - -	447
Influenza pneumonia, the use of the blood of a convalescent patient in the treatment of - - - - -	657	Trachoma - - - - -	675
Influenza as treated on a U. S. hospital ship - - - - -	707	Training school, can the small hospital maintain a? - - - - -	685
Influenza, bacteriology of the present epidemic of - - - - -	708	Transportation of the wounded - - - - -	499
Influenza, the, in the East - - - - -	596	Tuberculosis, an intensive method of treating - - - - -	405
Insanity, syphilis in its relation to - - - - -	220	Tumor, brain, ocular symptoms of - - - - -	70
Kidney injuries - - - - -	443	Tumors, some, of the neck - - - - -	436
Knee-joint, mechanical derangement of the - - - - -	523	Ulcer, gastric, the treatment of, in the ambulatory patient - - - - -	255
Letters from Minneapolis medical men at the front - - - - -	681	Urinary calculus, diagnosis of - - - - -	703
Letters from the front - - - - -	409	Vascular hypertension, chronic, in the ambulant - - - - -	247
Lung and chest wounds - - - - -	649	Veneral diseases, the warfare in Minnesota against - - - - -	347
Lung and chest wounds treated by artificial pneumothorax - - - - -	650	Vestibular apparatus, the, and its relation to aviation - - - - -	155
Meckel's diverticulum as a cause of surgical lesion - - - - -	259	Vocation, choosing a, in life - - - - -	229
Medical reserve corps, statistics of the - - - - -	226	War Hospitals, what the, are doing in Europe - - - - -	653
Medical School of the University of Minnesota, the development of the faculty of the - - - - -	161	War surgery - - - - -	617
Medicine, the early history of, in Minneapolis (in three parts) - - - - -	123, 163, 192	Wounded, the evacuation of the, in the British armies, and their treatment during removal - - - - -	647
Megacolon, a case of, with unusual complications; report of the case five years after radical operation - - - - -	625	Wounded, transportation of the - - - - -	499
Mental and nervous borderland cases - - - - -	561	Wounds in civil life, the treatment of as applied in modern warfare - - - - -	61
Mesopotamia, the campaign in - - - - -	656	Wounds, lung and chest - - - - -	649
Minneapolis clinic week, reports of clinics given during, April 8-12, 1918 - - - - -	350	X-ray, the part the, plays in the treatment of cancer - - - - -	190
Minneapolis clinic week, tentative program of Minnesota hospital association, first annual conference of the - - - - -	167		
Minnesota hospital association, president's address at the first annual conference of the - - - - -	413		
	416		

EDITORIALS

CONTRIBUTORS

War tension - - - - -	19	Allport, Frank - - - - -	225
Food suggestions - - - - -	20	Armstrong, Robt. B. - - - - -	190
"Jumping the claim" of the absent doctor - - - - -	21	Eastianelli, Raffaele - - - - -	650
Medical appointments by the governor of Minnesota - - - - -	46	Baxter, Stephen H. - - - - -	681
Narcotism and the war - - - - -	47	Beck, Emil G. - - - - -	5
Minnesota State Board of Health problems - - - - -	48	Bell, Warren - - - - -	681
Dr. Murphy resigns from the Minnesota Health Association - - - - -	48	Benjamin, A. E. - - - - -	61
Announcement—a hospital department - - - - -	79	Bishop, Wesley - - - - -	680
War casualties and their after-treatment - - - - -	80	Bodenstab, W. H. - - - - -	341
The pneumonia question - - - - -	80	Bowen, J. W. - - - - -	504
The Minnesota hospital situation - - - - -	81	Brewer, Geo. E. - - - - -	653
The University of Minnesota's get-together clinic - - - - -	83	Brown, George E. - - - - -	31
Minneapolis clinic week - - - - -	110	Clough, F. E. - - - - -	401
Loose surgery - - - - -	111	Conkey, C. D. - - - - -	70
Public bathing-beaches versus public health - - - - -	111	Cottam, G. G. - - - - -	153, 443
Minneapolis clinic week - - - - -	143	Crewe, J. E. - - - - -	405
A division for the regulation of venereal diseases created by the Minnesota State Board of Health - - - - -	144	Daignault, Oscar - - - - -	75
Two valuable papers - - - - -	144	Dodson, John M. - - - - -	91
A Northwestern public health league - - - - -	171	Duval, Pierre - - - - -	649
The work of the advisory boards - - - - -	172	French, H. E. - - - - -	10
The enlargement of the medical corps - - - - -	172	Friesen, H. J. - - - - -	530
Back to the farm - - - - -	173	Gask, Geo. Ernest - - - - -	647
TNT poisoning - - - - -	204	Gibson, Alexander - - - - -	585
The military status of the medical man - - - - -	205	Golseth, G. - - - - -	33
War against tuberculosis - - - - -	205	Granger, Chas. E. - - - - -	95
The community hospital: its needs and the need of it - - - - -	206	Grosvenor, L. N. - - - - -	710
Substitute for salvarsan - - - - -	207	Hamilton, Arthur S. - - - - -	123, 163, 192
Minneapolis clinic week - - - - -	233	Hanson, Olga S. - - - - -	251, 447
Minneapolis clinic week - - - - -	233	Hare, Earle R. - - - - -	436
Reconstruction camps - - - - -	234	Haynes, B. H. - - - - -	77
The administration of drugs by osteopaths - - - - -	235	Henderson, M. S. - - - - -	523
Caution about the publication of scientific papers by medical officers - - - - -	265	Henry, Clifford E. - - - - -	707
Children's year - - - - -	265	Ide, A. W. - - - - -	534
The slowly increasing medical corps - - - - -	266	Irvine, H. G. - - - - -	347
A new disease in the army - - - - -	267	Jones, W. A. - - - - -	561
Report of the Minneapolis clinic week - - - - -	267	Judd, E. S. - - - - -	617
A correction - - - - -	299	Jump, Henry J. - - - - -	499
Minneapolis clinic week a permanent organization - - - - -	300	Kenyon, Elmer L. - - - - -	555
A patriotic rally of physicians - - - - -	301	King, W. R. - - - - -	596
An attempt to wreck a health department - - - - -	331	Koobs, J. G. - - - - -	382
Major Jump's appeal - - - - -	332	Kuhlmann, F. - - - - -	215
The American Neurological Association - - - - -	333	Lajoie, J. M. - - - - -	447, 657
Medical and surgical clinics, again - - - - -	356	Law, Arthur A. - - - - -	16
Relief for soldiers' families - - - - -	356	Leavitt, Fred Elmer - - - - -	569
Volunteer medical corps - - - - -	357	MacLaren, Archibald - - - - -	185
The apathy of physicians - - - - -	359	McDonald, A. L. - - - - -	259
The report of Minneapolis clinic week, and a lesson drawn therefrom - - - - -	391	McIntosh, G. J. - - - - -	14
The meeting of the American Medical Association - - - - -	419	Michalson, H. E. - - - - -	158
Lieutenant Colonel Frank C. Todd - - - - -	420	Moersch, F. P. - - - - -	507
Deaths among doctors and soldiers in war time - - - - -	420	Moore, James E. - - - - -	161
Increase of mental disorders in war time - - - - -	449	Morse, A. W. - - - - -	620
French sanitation - - - - -	450	Murray, Wm. R. - - - - -	155
Situation on the western front - - - - -	484	Myles, Thomas - - - - -	651
Landlords in war time - - - - -	485	Norbeck, Peter - - - - -	44
Surgical instruments for France and Belgium - - - - -	511	Nordin, G. T. - - - - -	35
Greetings to Dr. H. W. Hill - - - - -	512	Oakley, J. H. - - - - -	675
A chiropath - - - - -	513	Olson, G. W. - - - - -	201, 354, 416
Reciprocity in medical licensure - - - - -	513	Phelps, R. M. - - - - -	220
Local and medical advisory boards - - - - -	514	Potter, A. C. - - - - -	708
Why should the Surgeon General appeal for medical officers? - - - - -	538	Powell, Louise M. - - - - -	686
Lowering the death-rate - - - - -	549	Pratt, J. A. - - - - -	40
"Well Done, Minnesota" - - - - -	540	Kiley, Georgia H. - - - - -	685
The annual meeting of the Minnesota State Medical Association - - - - -	540	Rishmiller, John H. - - - - -	43
Dr. Thomas McDavitt, the efficient secretary - - - - -	542	Roan, M. W. - - - - -	567
The Journal of the A. M. A. and The Journal-Lancet - - - - -	571	Rodda, F. C. - - - - -	501
The Mississippi Valley Conference on Tuberculosis - - - - -	571	Rosenow, E. C. - - - - -	624
The influenza alarm - - - - -	572	Rowntree, G. L. - - - - -	222
The drug habit - - - - -	602	Schneider, J. P. - - - - -	247
A marvelous disease death-rate - - - - -	603	Sharpe, William - - - - -	313
The influenza situation - - - - -	629	Spafford, F. A. - - - - -	599
The new draft - - - - -	631	Staples, H. L. - - - - -	105
The journal referendum muddle in the Minnesota State Medical Association - - - - -	632	Stone, Harold W. - - - - -	226
The Minneapolis Board of Health and the Board of Education - - - - -	633	Sweetser, H. B. - - - - -	342
The pulmonary influenza situation - - - - -	634	Sweetser, T. H. - - - - -	409
The plight of Dr. George G. Eitel, of Minneapolis - - - - -	659	Taylor, Rood - - - - -	433
Our foreign guests - - - - -	659	Trommes, Nils - - - - -	625
After the armistice what? - - - - -	661	Turner, G. Grey - - - - -	656
Doctors, nurses, and influenza - - - - -	661	Whittaker, H. A. - - - - -	98, 349
Vital statistics in Minnesota - - - - -	688	Williamson, G. W. - - - - -	495
The only ethical advertising for a physician - - - - -	689	Wilson, L. B. - - - - -	1
When will the doctors return? - - - - -	690	Wilson, R. D. - - - - -	591
The release of draft boards - - - - -	716	Wittich, F. W. - - - - -	252
Public health service - - - - -	717	Woldner, J. S. - - - - -	658
The editor and the publisher extend thanks and New Year's greeting - - - - -	717	Woutat, H. G. - - - - -	703
Vaccines against pneumonia - - - - -	718	Wright, Chas. B. - - - - -	255
Reconstruction from war wounds - - - - -		Wright, F. R. - - - - -	229, 714
The verdict of the medical profession in Minnesota, and its interpretation - - - - -		Young, C. L. - - - - -	132

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

REPORTED FROM 83 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

[illegible]

REPORTED FROM 53 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Epidemic Cerebro- Spinal Meningitis	Typhoid Fever	Diarrhoeal Diseases of Children	Cancer	Puerperal Septicemia	Accidental Deaths
Adrian	1,258	1,112	1															
Aitkin	1,719	1,633	1															
Akeley			1															
Appleton	1,184	1,221	0															
Belle Plaine	1,121	1,204	2	1														
Biwabik		1,690	1															
Bovey		1,377	1															
Browns Valley	721	1,058	1															
Buffalo	1,040	1,227	1															
Caledonia	1,175	1,372	1															
Cass Lake	546	2,011	3															1
Chisholm		7,684	4	1				1										1
Coleraine		1,613	0															
Delano	967	1,031	1															
Farmington	733	1,024	2															
Fosston	864	1,055	0															
Frazee	1,000	1,645	4															
Grand Rapids	1,428	2,239	0															
Hibbing	2,481	8,832	17		1	1												5
Jackson	1,756	1,907	0															
Janesville	1,254	1,173	0															
Kenyon	1,202	1,237	2	1														
Lake Crystal	1,215	1,038	0															
Litchfield	2,280	2,333	2															
Long Prairie	1,385	1,250	1															
Madelia	1,272	1,273	1															
Milaca	1,204	1,102	2															
Mountain Lake	959	1,081	2															
Nashwauk		2,080	0															
North Mankato	939	1,279	0															
North St. Paul	1,110	1,404	0															
Osakis	917	1,013	1															
Park Rapids	1,313	1,850	0															
Pelican Rapids	1,033	1,019	0															
Perham	1,182	1,376	0															
Pine City	993	1,258	0															
Plainview	1,038	1,175	1															
Preston	1,278	1,193	2															
Princeton	1,319	1,555	3															1
St. Louis Park	1,325	1,743	0															
Sandstone	1,189	1,818	1															
Sauk Rapids	1,391	1,745	1															
South Stillwater	1,422	1,343	2															
Springfield	1,511	1,482	1															
Spring Valley	1,770	1,817	1															1
Wadena	1,520	1,820	2															
Wells	2,017	1,755	2															
West Minneapolis	2,250	3,022	2															
Wheaton	1,132	1,300	4															1
White Bear Lake	1,288	1,505	2															1
Windom	1,944	1,749	3															
Winnebago City	1,816	2,555	0															
Zumbrota	1,119	1,138	1															
STATE INSTITUTIONS			2															
Anoka, Asylum			0															
Faribault, School for Blind			10															
Faribault, School for Deaf			0															
Faribault, School for Feeble Minded			22	8	1	2									1			
Fergus Falls, Hospital for Insane			4															
Hastings, Asylum			4															
Minneapolis, Soldiers' Home			5															
Owatonna, School for Dependents			0															
Red Wing, State Training School			0															
Rochester, Hospital for Insane			11	1											1			
Sauk Centre, Home School for Girls			0															
St. Peter, Hospital for Insane			15	2		2												
St. Cloud, State Reformatory			0															
Stillwater, State Prison			0															
OTHER PARTS OF STATE			661	52	8	14	6				7	3		4	63	55	1	35
Total for state			1748	131	30	72	22	2	1		12	5	2	10	127	160	6	109

*No report received. REGISTRAR not doing his duty
142 stillbirths not included in above totals.

Value In

Calories Per Pound

Quaker Oats . . .	1810
White Bread . . .	1200
Round Steak . . .	890
Eggs . . .	720
Young Chicken . . .	505

Cost

Average Per 1000 Calories

Quaker Oats . . .	5 cents
Meats . . .	.40 "
Eggs . . .	50 "

Meat, eggs, fish and fowl for the same energy units, cost 8 to 10 times Quaker Oats.

Eight people can be fed on Quaker Oats for the cost of feeding one on meat.

Each dollar's worth of Quaker Oats used to displace meat saves at least \$7.

And Quaker Oats supplies a food well-balanced, rich in minerals, reasonably complete. It is 16 per cent protein and nearly 8 per cent fat.

Its use should be encouraged in these times of high food cost.

Quaker Oats

The superlative flavor of Quaker Oats is due to selected grains. We use the queen oats only—just the rich, plump oats. We get but ten pounds from a bushel. Yet this extra flavor costs no extra price.

The Quaker Oats Company

Chicago

2015

Pasteur Treatment for Rabies

as made and improved by Dr. D. L. HARRIS, St. Louis, Mo.

U. S. Government License 66

CHIEF POINTS OF HARRIS METHOD FOR RABIES

The treatment of rabies by the Harris method is as simple as the giving of any vaccine.

Any doctor who can use a hypodermic syringe can give the Pasteur Treatment for Rabies as modified and made by Dr. D. L. Harris.

The treatment is so stable that it can be shipped anywhere and kept any reasonable length of time without loss of immunizing value.

Immunity is established earlier and lasts longer with the Harris Method than by the old Pasteur method. By this method a virus of constant and known potency is used and dosage can be accurately determined.

Full Course Treatment . . . \$25.00

Telegraph orders given prompt attention

NATIONAL PATHOLOGICAL LABORATORY Sole Distributors

CHICAGO
5 S. Wabash Ave.

NEW YORK
18 E. 41st Street

ST. LOUIS
University Club Bldg.

Rest and Convalescent Home

3349 Second Ave So., Minneapolis

N. W. Phone Colfax 2507

Conducted on Strictly Ethical Lines.
¶ Equipped to care for a Limited Number of Patients. ¶ Chronic Nervous and Mild Mental Cases Solicited. ¶ Location is Ideal—three short blocks from carlines. ¶ Strict Attention given to Dietetics.

INA E. VARCO, Supt. and Dietitian

EYE SIGHT TESTS

ALL cases referred to me will be refracted carefully and the courtesy treated in a purely ethical manner.

K. J. KNAPP

REGISTERED OPTOMETRIST

KINDY-KNAPP, Inc.

719 Nicollet Ave.

Minneapolis.

N. W. 7038—T. S. 33929

**Be Sure You Get
The Minneapolis Milk
Co's Bottling**



IT MEANS PURE MILK

Milk is the cheapest and best food on the market today, and every family can save money by using two or three times the usual amount consumed by the family. ¶ A perfectly pasteurized milk is perfectly free from all harmless germs; and no other milk should be used by either children or adults. ¶ Our milk is scientifically pasteurized at an absolutely uniform temperature as applied from day to day. Every process it goes through is an automatic process, eliminating every chance of contamination. ¶ Physicians can recommend it with certainty that it meets all their demands for purity and for uniformity in the elements that make milk an ideal food, both for the well and the sick.

METROPOLITAN MILK COMPANY

T. S. 33 377

900 SOUTH SIXTH STREET

N. W. Main 2348

PUBLISHER'S DEPARTMENT

THE MOOR (MUD) BATHS

The Grand View Health Resort, of Waukesha, Wis., has a fireproof and thoroughly modern building, giving all the advantages and comforts of a first-class hotel. Its Moor (Mud) baths have given the institution a high reputation for its successful results in the treatment of the large group of ailments due to defective elimination and circulation. The list is a long one, and furnishes not a few exceedingly intractable cases that yield readily to the above treatment.

Full information of their work will be cheerfully furnished by the Grand View Health Resort, Waukesha, Wis.

DR. HARRI'S PASTEUR TREATMENT FOR RABIES

The National Pathological Laboratories, of Chicago, New York and St. Louis are now sole distributors of Dr. D. L. Harri's Pasteur treatment for Rabies. This antirabic virus, as put out by The National Pathological Laboratories, establishes an immunity in ten days where other vaccines require fourteen and twenty-one days. Also it is very stable, and keeps for a period of several months, and can be shipped anywhere without losing its immunizing value. Any physician can use this virus; and by this method a virus of constant and known potency is used, and the dosage can be accurately determined. The cost of the full treatment is considerably less than any antirabic virus heretofore put on the market. Full course treatment, \$25.00. Telegraph orders given prompt attention.

National Pathological Laboratory, Chicago, 5 S. Wabash Ave.; New York, 18 E. 41st Street; St. Louis, University Club Bldg.

SHARP & SMITH INSTRUMENT MAKERS AND IMPORTERS

There are few more dependable houses in any line of manufacturing than the long-established house of Sharp & Smith, of Chicago, who make only high-grade surgical instruments. They manufacture a number of specialties, and at prices so moderate that they belong in the bag of every physician, whether a specialist or a general practitioner. Such an instrument is the De Hillis Improved

Stethoscope, which is so designed as to make the observation of the fetal heart-sounds during a difficult labor just as easy for the physician to examine there sounds as to examine them under normal conditions.

The De Hillis instrument is a valuable and inexpensive (\$6) instrument.

The catalogue of Messrs. Sharp & Smith should be in the hands of every surgeon and general practitioner.

THE THOMAS HOSPITAL

The Thomas Hospital is an institution for the treatment of tuberculosis of which Minneapolis is justly proud. Its building and grounds are beautiful, and the view across and up and down the Mississippi river, from the high bank on which the building is located, is superb. They are a part of the environment that makes for peace of mind, and supplements all forms of treatment.

The institution has the home atmosphere, for it was founded to be a home for the unfortunates who are compelled to abide there. It is quite safe to say no

THE CREWE SANITARIUMS

Dr. J. E. Crewe, of Rochester, Minn., conducts two sanitariums in that famous medical city, the home of the Mayo Clinic. One of Dr. Crewe's two institutions is devoted to the intensive treatment of tuberculosis and the other the treatment of chronic diseases of metabolism by diet and hygienic methods.

Dr. Crewe is thoroughly ethical and thoroughly honorable. Several of his papers, read before the Mayo

"The Home of Thrift"

ONE KIND OF BANKING

This bank does a Savings Bank business only.

Why not entrust your savings to a specialist in that line?

We will invest your money in the same conservative manner that during the past 40 years has established this Bank in the confidence of the people of Minneapolis.

Money deposited on or before Jan. 10th earns interest from Jan. 1st at

4¹/₂% Compounded Quarterly.

FARMERS & MECHANICS SAVINGS BANK

115 S. 4th Street,

Minneapolis, Minn.

Build up a reserve fund in a Savings Account at the

First and Security National Bank

Capital and Surplus Ten Million Dollars
Marquette Avenue at Fifth Street

We Invite You to Do Your Banking here

aff, have been published in *THE JOURNAL*—and it is our belief that he is doing a work of great interest and value to the profession. It is a work worthy of careful study by physicians; and perhaps the best way to study it by one outside of Rochester is to send Dr. Crewe a patient and carefully watch the results obtained by him.

Correspondence with Dr. Crewe, together with a reading of his papers on his methods, will convince any physician that Dr. Crewe is getting excellent results from wholly rational methods.

THE JORDAN SULPHUR SPRINGS AND MUD BATH SANITARIUM

The Jordan Sanitarium is conducted in a manner that commends the institution to the medical profession, and it is getting results that are worth having and worth commending. The patient who goes there completely incapacitated by some form of rheumatism or dyspepsia, perhaps lame and suffering intensely, and gets almost immediate relief, and maintains even this gain for weeks or months, will not stop to inquire whether the sulphur-mud bath or nature, or even slight or no medication, did the work. He will just rejoice; and such patients are so numerous as to make "statistics" tell the truth.

Every physician cannot give massage and mud baths, but every physician should know their value and, as well, their limitations; and the patient suited to such treatment should have it by the proper direction of his family physician. It is safe to direct these patients to the Jordan Sanitarium, of which Dr. N. E. Atkinson is the resident physician, and Mr. J. J. Leonard is the manager.

THE PNEUMONIA CONVALESCENT

In spite of all of the modern advances in scientific therapy, and the improvements in the general handling and management of acute infectious diseases, acute lobar pneumonia still deserves the title ascribed to it by Osler: "The Captain of the Men of Death." There are, however, especially during the Fall and Winter months, many cases of the lobular or irregular pneumonia that so often complicates or follows la grippe. When this condition supervenes it is more than likely to follow a sub-acute or chronic course, and convalescence is frequently long delayed. Under such circumstances, in conjunction with treatment designed to hasten resolution, a general blood tonic and vitalizing agent helps materially to shorten the convalescent period. Pepto-Mangan (Gude) is of much value in this field, because it not only increases the solid elements of the blood, but also acts as a true tono-stimulant to the organism generally. As Pepto-Mangan is free from irritant properties and constipating action, it is especially serviceable in the reconstructive treatment of the devitalization following the pneumonia of the aged.

THE MEDICAL PROTECTIVE COMPANY

Some heavy verdicts recently obtained in "malpractice" suits against Northwestern physicians have set physicians to thinking that the only medical protective insurance worth while is insurance which pays both the lawyer's fees and the jury's award. A malpractice suit ending in a verdict for from one to five thousand dollars, together with the implication that the doctor against whom it is sustained is guilty of genuine malpractice, is a very bad thing, and its memory is well

nigh imperishable, at least for the man especially interested.

The Medical Protective Company, of Ft. Wayne, Ind., permits very few such verdicts, for it employs the best legal talent in America to assist the local defending attorney; and it thus makes such suits unprofitable. If, perchance, a verdict is obtained, and stands the test of the highest court, the Company pays it.

When such insurance can be had at a very low cost, no doctor does himself, his family, or the medical profession justice unless he carries it. As the professional bank thief keeps away from banks insured in the Pinkerton Bankers' Organization, so the professional malpractice lawyer generally keeps away from physicians insured in the Medical Protective Company of Ft. Wayne, Ind.

EVERY-DAY ACES AND PAINS

The importance of paying attention to the little things of every-day life is based on sound common sense. Thus the prompt relief of the comparatively slight and inconsequential aches and pains that medical men so often encounter in their daily work not infrequently constitutes therapeutic genius and lays the foundation of many a physician's professional success. It is the doctor who is able to control and overcome a severe headache, an attack of trifacial neuralgia or the pain of lumbago, to whom the people sooner or later come with their big life and death problems.

All of which indicates why K-Y Analgesic should commend itself to the discriminating physician whenever he needs a safe and effective local anodyne. K-Y Analgesic is not offered to the practitioner, however, with any idea that it will take the place of, or make unnecessary, general or systemic treatment.

It is simply a safe and exceedingly useful adjunct that may be relied upon to control and relieve the pain of headache and neuralgia, while other measures are attacking and removing underlying causes.

In other words, K-Y Analgesic is a non-greasy, local anodyne, remarkably effective in its proper field of use, and one that the painstaking medical man will become more and more attached to as he sees and appreciates its efficacy, its cleanly character, and complete freedom from disagreeable or harmful effects.

THE MINNEAPOLIS CLINICAL LABORATORY

Dr. Henry L. Ulrich, the director of the Minneapolis Clinical Laboratory, has given the medical profession of the Northwest a service not measured by the mere routine of laboratory tests. Dr. Ulrich has been a pioneer in autovaccine work, and he has become a reputed consultant of many physicians in the handling of their difficult and obstinate cases, for both diagnosis and treatment.

Dr. Ulrich established the first public clinical laboratory in the Northwest. The laboratory is located at 410 Syndicate Building, Minneapolis.

Other city has a superior home for the tuberculous patients. Its management, while strictly scientific, recognizes the value of the kindly personal touch with each patient; and everyone connected with it, in any capacity whatever, gladly shares the responsibilities and the opportunities of the institution.

Its rates are exceedingly moderate, as becomes its aims.





